

EVIDENTIARY HEARING  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
for Mirant Corporation's	)	00-AFC-4
Potrero Power Plant	)	
Unit 7 Project	)	
_____	)	

VOLUME II

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TUESDAY, JUNE 25, 2002

10:04 a.m.

Reported by:  
Peter Petty  
Contract No. 170-01-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

Robert Pernell, Commissioner, Presiding Member

William Keese, Commissioner, Associate Member

HEARING OFFICER AND ADVISOR PRESENT

Stanley W. Valkosky, Hearing Officer

Michael Smith, Advisor to Commissioner Keene

STAFF AND CONSULTANTS PRESENT

William W. Westerfield, III, Staff Counsel

Richard Ratliff, Staff Counsel

Mark Hesters, Associate Electrical Engineer

Kevin Kennedy, Siting Program Manager

Johan Galleberg, Grid Planning Engineer  
California Independent System Operator

Dr. Obed Odoemelam

APPLICANT

Michael J. Carroll, Attorney  
Latham & Watkins

Robert Jenkins, Transmission Support  
Valerie Zambito, Director of Technical Support  
Mirant Corporation

Dale Shileikis  
Kelly Haggerty  
URS Corporation

Marcus Young  
Teddy Gray  
Singer and Associates

INTERVENORS

Jacqueline Minor, Deputy City Attorney  
City and County of San Francisco

William B. Rostov, Staff Attorney  
Communities for a Better Environment

Marcie Keever, Environmental Law & Justice Clinic  
Golden Gate University School of Law  
Southeast Alliance for Environmental Justice/  
Our Children's Earth Foundation

Edward Smeloff, Assistant General Manager  
San Francisco Public Utilities Commission

Barry Flynn, Consultant  
Flynn Resource Consultants, Inc.

Andrea Pomponi  
Camp Dresser McKee (phonetic)

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## P R O C E E D I N G S

10:04 a.m.

COMMISSIONER PERNELL: Good morning.

This is a continuation of the evidentiary hearing of the proposed Potrero Unit Seven project. I hope everyone had a lovely evening in San Francisco for those who are not living in San Francisco.

This morning I'd like to proceed with first introductions. I'd like to introduce the Committee. My name is Robert Pernell. I am the presiding member of the Committee. The other member of the Committee is the chairman of the Commission, Commissioner Keese. He is the associate member. And to his left is his advisor, Mike Smith, and to my right is our hearing officer, Stan Valkosky.

I'd like to begin by having the Applicants introduce themselves and their team.

MR. CARROLL: Good morning. Mike Carroll with Latham and Watkins on behalf of the Applicant. Here with me today, on my left is Robert Jenkins of Mirant. Also with us in the audience is Valerie Zambito of Mirant, Dale Shileikis and Kelly Haggerty of URS Corporation,

1 and Marcus Young and Teddy Gray of Singer and  
2 Associates.

3 PRESIDING COMMISSIONER PERNELL: Thank  
4 you, welcome.

5 Staff.

6 MR. WESTERFIELD: Bill Westerfield,  
7 counsel for the Energy Staff. And also with me  
8 today is Dick Ratliff, also counsel for Staff;  
9 Kevin Kennedy, site program manager for the  
10 Potrero Seven project, and I can introduce our two  
11 witnesses when they testify.

12 PRESIDING COMMISSIONER PERNELL: Could  
13 we do that now?

14 MR. WESTERFIELD: Sure, we could do that  
15 now. This is Johan Galleberg, who is with the  
16 Independent System Operator, and also Mark  
17 Hesters, transmission systems engineering for the  
18 CEC staff.

19 PRESIDING COMMISSIONER PERNELL: Okay.  
20 Good morning, welcome.

21 Intervenors, City and County of San  
22 Francisco.

23 MS. MINOR: Good morning. Jackie Minor  
24 with the City Attorney's Office representing the  
25 City and County of San Francisco in this

1 proceeding. We will have two witnesses today, one  
2 of whom is here. Barry Flynn is here, a  
3 consultant with the City and County of San  
4 Francisco in transmission and engineering issues,  
5 and we're also expecting Ed Smeloff with the San  
6 Francisco Public Utilities Commission.

7 Also here is Andrea Pomponi, who is with  
8 Camp Dresser McKee (phonetic), who serves as  
9 project management support for the City and County  
10 of San Francisco in this project.

11 PRESIDING COMMISSIONER PERNELL: Thank  
12 you, welcome.

13 Communities for a Better Environment?

14 MR. ROSTOV: William Rostov for  
15 Communities for a Better Environment.

16 MS. KEEVER: And I'm Marcie Kever. I'm  
17 with the Golden Gate University Environmental Law  
18 and Justice Clinic. I'm here on behalf of  
19 Intervenors Southeast Alliance for Environmental  
20 Justice and Our Children's Earth Foundation.

21 PRESIDING COMMISSIONER PERNELL: Okay,  
22 welcome.

23 Are there any other agencies that are  
24 represented here today?

25 Seeing none, our public adviser, won't



1 be with us, but we do have cards in the back if we  
2 need to sign up. We have blue cards if you want  
3 to sign up to address the Committee, and we'd ask  
4 that you do that and state the topic or subject  
5 matter that you want to address the Committee on  
6 for those who want to address the Committee.

7 And I think that's all the housekeeping.  
8 I'd like to turn it over to our hearing officer --  
9 Oh, Chairman Keese, is there anything you want  
10 to --

11 So I'll turn the hearing over to our  
12 hearing officer, Mr. Valkosky.

13 HEARING OFFICER VALKOSKY: Thank you,  
14 Commissioner Pernell.

15 The two topics on today's agenda are  
16 transmission system engineering, transmission line  
17 safety and nuisance. On the first topic I have  
18 one witness from Applicant, two from Staff, two  
19 from the City and County of San Francisco, with  
20 cross-examination by Applicant, Staff, and the  
21 City and County; is that correct? Any changes to  
22 that?

23 MR. CARROLL: No changes from the  
24 Applicant.

25 MR. ROSTOV: CBE might want a couple of

1 minutes on cross-examination.

2 MR. RATLIFF: Staff will only have one  
3 witness in transmission line safety and nuisance,  
4 if that was the question.

5 HEARING OFFICER VALKOSKY: No, I didn't  
6 get to that topic yet.

7 MR. RATLIFF: Oh, I'm sorry.

8 HEARING OFFICER VALKOSKY: Okay. Excuse  
9 me, Mr. Rostov, CBE would like a minimum amount of  
10 time?

11 MR. ROSTOV: Yes, 15 minutes, sir.

12 HEARING OFFICER VALKOSKY: Okay. And on  
13 transmission line safety and nuisance, we have a  
14 panel from the Applicant and one witness from the  
15 Staff, with cross only by CBE; is that correct?

16 MR. CARROLL: That is correct, in terms  
17 of what we had identified. We have a problem with  
18 Mr. Pearson, who was flying in from Denver to  
19 testify on the transmission line safety and  
20 nuisance. Due to problems with his flights, he is  
21 not here and won't be here today.

22 PRESIDING COMMISSIONER PERNELL: You say  
23 he won't be here?

24 MR. CARROLL: Will not be here, and this  
25 was something that just arose last night.

1 Mr. Pearson's testimony is limited to EMF issues,  
2 and he's sponsoring -- his only exhibit that he's  
3 sponsoring is about three or four pages out of the  
4 application for certification that deal with EMF.

5 If there is a desire on the part of the  
6 parties to cross-examine Mr. Pearson on those  
7 issues, then what we would request is that his  
8 testimony be put over until another date and we  
9 will have him here. If there isn't any desire to  
10 cross-examine him on EMF issues, then Mr. Jenkins  
11 would simply sponsor the entirety of the sections  
12 on transmission, including those three or four  
13 pages that we had reserved out for Mr. Pearson.  
14 So, depending on the desire of the parties with  
15 respect to cross-examination, what we would ask is  
16 that we either allow Mr. Jenkins to sponsor what  
17 Mr. Pearson was initially going to sponsor or that  
18 we be permitted to bring Mr. Pearson back at a  
19 later time.

20 HEARING OFFICER VALKOSKY: Okay.

21 Mr. Rostov, CBE is the only cross-examining party  
22 that I have down.

23 MR. ROSTOV: Right. We were only  
24 planning on cross-examining CEC staff on this  
25 topic, so it's fine if Mr. Pearson is not here for

1 us.

2 HEARING OFFICER VALKOSKY: Okay. So  
3 that won't be a problem, then. And we'll deal  
4 with that when we get to that topic, thank you.

5 Okay. With that, transmission system  
6 engineering, Mr. Carroll?

7 MR. CARROLL: Yes. The Applicant calls  
8 Robert Jenkins.

9 HEARING OFFICER VALKOSKY: Swear in the  
10 witness, please.

11 THE REPORTER: Stand and raise your  
12 right hand, please.  
13 Whereupon,

14 ROBERT JENKINS  
15 Was called as a witness herein and, after first  
16 being duly sworn, was examined and testified as  
17 follows:

18 MR. CARROLL: Thank you.

19 DIRECT EXAMINATION

20 BY MR. CARROLL:

21 Q Mr. Jenkins, could you please state your  
22 name and title and responsibilities with respect  
23 to the project.

24 A My name is Robert Jenkins. I am a  
25 transmission support principal with Mirant

1 Corporation, and with respect to this project I am  
2 responsible for the transmission interconnection  
3 system upgrades.

4 Q And are you the same Robert Jenkins that  
5 submitted prepared testimony including a statement  
6 of your qualifications in a document that's now  
7 been identified as a portion of Exhibit 17?

8 A Yes.

9 Q And if I were to ask you the questions  
10 contained in that material today under oath, would  
11 your answers be the same?

12 A Yes, they would be the same.

13 Q And do you have any clarifications to  
14 make to your prepared testimony?

15 A Clarification with respect to the new  
16 design versus the AFC, but I think that that's  
17 addressed adequately in my testimony and I'll be  
18 open to questions to the extent any of the parties  
19 have concerns about that portion.

20 Q Okay, thank you. And am I correct that  
21 there are also a number of exhibits identified in  
22 your prepared testimony that you're sponsoring  
23 today?

24 A Yes. I am also sponsoring an additional  
25 exhibit that was not identified in my prepared

1 testimony. This is a one-page letter dated  
2 June 21st, 2002 submitted by Mirant to the CEC in  
3 response to a recent question regarding the final  
4 SIFS. It clarifies that Mirant will implement a  
5 special protection system to address a contingency  
6 overload identified in the final SIFS.

7 Q And could you please provide a brief  
8 description of the project's transmission system  
9 and interconnection to the grid?

10 A First let me begin with the  
11 interconnection. The project will interconnect to  
12 the PG&E Potrero switch yard, the short 115 KV  
13 transmission connections. Due to the location of  
14 Unit Seven on the plant site, it is necessary to  
15 roll the existing connections of Units One --  
16 excuse me, Units Three, Four, Five, and Six, so  
17 you'll actually be reconnecting existing units as  
18 part of the connection of Unit Seven. There is a  
19 figure in the PG&E study of this new connection,  
20 figure 1-2.

21 As far as the system goes, a bus  
22 parallel breaker will be installed to 115 KV  
23 underground transmission cables between Potrero  
24 switch yard and Hunter's Point switch yard will be  
25 installed. A special protection system will be

1 installed, and two overstressed circuit breakers  
2 will be replaced.

3 Q And could you clarify with respect to  
4 the cables between the Potrero substation and the  
5 Hunter's Point substation whether or not those are  
6 part of the project that is currently under review  
7 by the AFC, and also the potential for an  
8 arrangement between Mirant and Hetch Hetchy  
9 whereby Mirant would piggyback on a cable that  
10 Hetch Hetchy is installing?

11 A Yes, I will comment on that. The  
12 transmission cables are to be included as part of  
13 this project; however, we view the transmission  
14 cables as being a backup or secondary plan.  
15 Ideally, we would like to work with the City and  
16 participate in the project that the City is  
17 preparing between Hunter's Point and Potrero. And  
18 also, I understand that PG&E has an interest in  
19 participating in that project as well. We think  
20 it would be beneficial for the City, PG&E, and the  
21 citizens of the area as well as Mirant to all  
22 participate in a single project.

23 Q So to the extent that the cables are  
24 included in this project that's currently before  
25 the Energy Commission, that would be as a backup

1 to working together with PG&E, Hetch Hetchy?

2 A Yes.

3 Q Thank you. And could you please explain  
4 how the current proposed interconnection differs  
5 from what was presented in the application for  
6 certification.

7 A I have provided a detailed description  
8 at item 18 in my prepared testimony, but a short  
9 general description is probably worthwhile here  
10 for clarification. The original proposal in the  
11 AFC had two switch yards side by side, one the  
12 existing PG&E Potrero switch yard, and the second  
13 a new Mirant Potrero switch yard. They would be  
14 geographically, again, side by side, and be  
15 connected together.

16 The new proposal is to have these two  
17 switch yards merged into a single switch yard,  
18 rather than having two separate switch yards.

19 Q And can you please summarize the  
20 analysis and the conclusions that are set forth in  
21 the final system impact and facilities study?

22 A Again, I described these in my prepared  
23 testimony, but in summary, PG&E prepared a study  
24 that looked at the thermal issue on the  
25 transmission lines, transient stability issues,



1 and short circuit issues. With the two Potrero  
2 Hunter's Point circuits in place, PG&E identified  
3 no transient stability issues.

4 They identified several potential  
5 thermal overloads, four on 115 KV cables within  
6 the City for level B contingencies, and these were  
7 addressed through a special protection scheme.  
8 There were also identified some thermal overload  
9 issues outside the City, further down the  
10 peninsula, and these overloads are being addressed  
11 through existing PG&E projects on their ISO-  
12 approved transmission expansion plan.

13 Lastly, with respect to short circuit,  
14 assuming that Hunter's Point is shut down,  
15 overstress was identified on two PG&E breakers  
16 that violates PG&E engineering practice, and these  
17 would need to be replaced.

18 Q Thank you. And have you reviewed the  
19 supplemental testimony dated June 12th filed by  
20 the Energy Commission staff on transmission system  
21 engineering, and also the prepared testimony dated  
22 June 11th submitted by the City and County of San  
23 Francisco regarding transmission system  
24 engineering?

25 A Yes.

1           Q     Both the CEC staff and the City express  
2     in those documents concerns regarding the  
3     assumption in the final study that the Hunter's  
4     Point power plant must be off line prior to  
5     Potrero Seven coming on line.

6                     Could you please respond to that  
7     concern?

8           A     In the long term, the plan is to have no  
9     Hunter's Point power plant when Potrero Seven is  
10    on line, that we recognize there are transitional  
11    issues associated with bringing a new plant on  
12    line and shutting down Hunter's Point.  You  
13    obviously cannot do both simultaneously and still  
14    manage uncertainties associated with plant  
15    startup.  So there would be some period I'd call a  
16    shakedown period for the power plant, and during  
17    that time there would have to be measures taken to  
18    avoid short circuit issues on the system.

19                    We've had discussions with PG&E  
20    operations and they've concurred that operational  
21    solutions are a preferred method of dealing with  
22    these transitional issues between the time Potrero  
23    Seven comes on line and Hunter's Point shuts down.  
24    These operational measures could be something  
25    along the lines of either a connection protocol

1 where one could identify the number of units that  
2 could be connected to the system without exceeding  
3 short circuit levels, or they could be temporary  
4 operating arrangements. PG&E has suggested that  
5 there bus arrangements they could implement on  
6 their system which could reduce short circuit duty  
7 during this transitional period.

8 Also, I should mention that the breakers  
9 in question are very close to their capability,  
10 even without the Potrero Seven project. And there  
11 are plans in PG&E's transmission expansion plan --  
12 for example, the Jefferson Martin 230 KV line --  
13 which may very well, in and of itself, necessitate  
14 the replacement of these breakers.

15 ASSOCIATE COMMISSIONER KEESE: Excuse  
16 me. Is the suggestion you're making that the two  
17 plants would be operated -- would not be operated  
18 at the same time? If testing one, you would back  
19 off on the other but you would have it as a  
20 reserve? What is the suggestion here?

21 THE WITNESS: The short circuit levels  
22 become an issue identified in the PG&E study when  
23 every machine at Hunter's Point and every machine  
24 at Potrero are on line. So what would need to be  
25 defined are the subsets that could provide an

1 acceptable level of short circuit on the system.

2 It may mean that, for example, that you  
3 would not be able to run the CTs at the same time  
4 that you're running Potrero Three, Potrero Seven,  
5 and Hunter's Point Four. So it's a hypothetical,  
6 it's an analysis that had to be prepared by PG&E,  
7 but it would be some protocol that would identify  
8 at what point you would end up with a short  
9 circuit.

10 ASSOCIATE COMMISSIONER KEESE: Okay, and  
11 what is the shakedown period you're talking about?

12 THE WITNESS: It depends upon the plant,  
13 but normally I would expect it to be maybe three  
14 to five months, in that period.

15 ASSOCIATE COMMISSIONER KEESE: Just  
16 following that up, put differently, then, is what  
17 you are saying that after a three to five month  
18 transition period, if Potrero Seven came on line,  
19 that Hunter's Point would then be taken off line  
20 permanently, or --

21 THE WITNESS: Obviously, we can't  
22 control the ability to take Hunter's Point off  
23 line. What we would have to have is some sort of  
24 agreement or arrangement ahead of time that would  
25 cover that particular situation. Our

1 understanding, of course, is that PG&E and the  
2 City have an agreement that once the ISO  
3 determines that Hunter's Point can reliably be  
4 shut down and would be so we have an expectation  
5 that that is PG&E's goal, to shut down Hunter's  
6 Point, and that's the City's goal, to shut down  
7 Hunter's Point, what we would have to have is some  
8 sort of assurance or agreement that would outline  
9 what is the time line for shutting down Hunter's  
10 Point when Potrero Seven comes on line.

11 It would not be efficient engineering or  
12 economically efficient to design a whole system to  
13 accommodate both plants when every expectation is  
14 that one plant is going to be shut down.

15 ASSOCIATE COMMISSIONER KEESE: Okay.  
16 I'm sorry, continue.

17 BY MR. CARROLL:

18 Q And just for purposes of clarification,  
19 am I to understand that this issue has been the  
20 subject of conversation between Mirant, PG&E, and  
21 the ISO, so what you just relayed in terms of  
22 discussion of this issue is not purely from  
23 Mirant's perspective but this is the product of  
24 discussions with the other entities as well?

25 A We've had discussions, the ones I recall

1 discussing this are primarily between PG&E and  
2 Mirant. California ISO has only discussed it in  
3 very broad terms. They haven't been real specific  
4 about the time line for shutting down Hunter's  
5 Point, but they also recognize that there is this  
6 agreement to try to shut down Hunter's Point power  
7 plant. And there are real impediments to keeping  
8 it operational into 2005.

9 Q Thank you. The CEC staff points out  
10 that the final study identifies one contingency  
11 overload that could be mitigated by either  
12 replacing soil around an existing underground  
13 cable or by a special protection system, and  
14 expresses concern that if Mirant chose to replace  
15 the soil as opposed to implementing the SPS that  
16 the impacts of the soil replacement have not been  
17 analyzed.

18 Can you clarify which of those two  
19 mitigation measures Mirant plans to implement?

20 A Yes. We plan to implement the special  
21 protection system and have submitted the letter --  
22 That's the letter referred to earlier, the  
23 June 21st letter -- to the CEC stating that. And  
24 that should be sufficient to address the overload  
25 identified in the PG&E study.

1           Q     So, in other words, the soil replacement  
2     would not take place.

3           A     That's correct.

4           Q     The CEC staff, in its supplemental  
5     testimony, also expresses concerns relating to  
6     whether or not impacts associated with the  
7     expansion of the Potrero substation have been  
8     analyzed. Could you also respond to that concern?

9           A     Yes. The work we are proposing at the  
10    Potrero substation would be within what is now the  
11    existing Potrero switch yard. PG&E has recently  
12    expanded the Potrero switch yard to meet PG&E's  
13    needs, and as part of this expansion process, PG&E  
14    designed an ultimate design for the station. So  
15    the expansion was to be sufficient to accommodate  
16    the forecast future needs of both PG&E and they  
17    also consulted with Mirant, and included those  
18    elements as reflected in the transmission study  
19    prepared by PG&E for Mirant.

20                So there would be no -- Our  
21    understanding of discussions with PG&E, there  
22    would be no additional expansion necessary at  
23    Potrero. The work could be done with the existing  
24    switch -- within existing substation boundaries.

25           Q     Thank you. The City and County of San

1 Francisco, in their prepared testimony of  
2 Mr. Flynn, express concerns regarding any special  
3 protection system that would require generation  
4 dropping.

5 Could you respond to that concern,  
6 please.

7 A Yes. The condition identified in the  
8 study that would require generation dropping is  
9 when there is a very high level of generation in  
10 the City. The PG&E study reflected 960 megawatts  
11 of generation in the City, and at that point some  
12 generation dropping would be necessary if one of  
13 these contingencies were to occur.

14 The generation dropping being discussed  
15 are the existing combustion turbines at the  
16 Potrero site. And tripping of just the combustion  
17 turbines would be sufficient to mitigate the  
18 overload, but that would still leave 860 megawatts  
19 of generation within the City.

20 Also, the system is designed such that  
21 it is only actuated or generation is only tripped  
22 when the actual overload exists. So that if there  
23 were a loss of the cable and the generation in the  
24 City was less, sufficiently less so there would  
25 not be a transmission overload, then there would



1 be no tripping. So you're only tripping  
2 generation when you actually need to, and that is  
3 at a time when there is a high level of generation  
4 in the City.

5 Now, also the level of the generation  
6 being tripped, if you're tripping these three  
7 combustion turbines which is 144 megawatts, this  
8 should not represent an issue for the area outside  
9 of San Francisco as there are many more single  
10 contingencies which are much greater than the loss  
11 of 144 megawatts.

12 Now, the ISO has established guidelines  
13 for applying special protection systems to  
14 generators, and the ISO has reviewed the proposal  
15 and has concurred with the proposal for the  
16 special protection scheme for Potrero Seven  
17 interconnection.

18 Q Thank you. Have you reviewed the  
19 proposed conditions of certification set forth in  
20 the final staff assessment?

21 A Yes, I have.

22 Q And do you have any concerns regarding  
23 any of those proposed conditions of certification?

24 A One element which still needs to be  
25 worked through with PG&E, and this relates to one

1 of the proposed conditions of certification,  
2 electric rule 21, and embedded in electric rule 21  
3 there is a reference to under-frequency tripping,  
4 which appears to be acceptable. But also in the  
5 same --

6 HEARING OFFICER VALKOSKY: Excuse me,  
7 could you refer specifically to the condition?

8 THE WITNESS: Okay, pardon me.

9 MR. ROSTOV: And the page number,  
10 please, of the --

11 MR. WESTERFIELD: FSA.

12 MR. ROSTOV: -- final staff assessment.

13 THE WITNESS: Okay, this is page 6.5-13.  
14 This is TSE-5, subpart (d). "Termination  
15 facilities shall comply with CPUC rule 21,  
16 applicable interconnection standards."

17 And what we have is CPUC rule 21 has a  
18 standard with respect to under-frequency generator  
19 tripping, and PG&E also has an interconnection  
20 handbook which has a standard with respect to  
21 under-frequency generator tripping. And the  
22 interconnection handbook is more detailed with  
23 respect to the set points.

24 And we have had some preliminary  
25 discussions with General Electric, but it would

1 appear at this stage that PG&E's standard violates  
2 the design of GE's combustion turbines. The GE  
3 standard is that if the frequency gets down to 57  
4 Hz, their combustion turbines will trip off in a  
5 tenth of a second. The PG&E standard is it should  
6 trip off in one minute. So we need to resolve  
7 this with PG&E.

8 Since these are very common machines,  
9 installed throughout California and the West,  
10 there must be some resolution of this and we have  
11 to work this out with PG&E.

12 PRESIDING COMMISSIONER PERNELL: What  
13 does the CPUC rule 21 standard say?

14 THE WITNESS: That standard says 58 Hz.  
15 Actually, let me read the wording, because it also  
16 alludes to there may be additional standards.

17 This is -- PG&E rule 21 is page -- Yes,  
18 it looks like page 43731 --

19 PRESIDING COMMISSIONER PERNELL: I'm  
20 interested in the CPUC's standard, not PG&E's.

21 THE WITNESS: Yes. This is the PG&E  
22 rule 21 that's been approved by the PUC.

23 PRESIDING COMMISSIONER PERNELL: All  
24 right.

25 THE WITNESS: In here it says, "For

1 generating facilities 11 KVA" -- Excuse me, "For  
2 generating facilities larger than 11 KVA, low-  
3 frequency settings of 59.3 Hz and 58 Hz may be  
4 used with the consent of PG&E."

5 But just before that I should read the  
6 previous sentence, "PG&E may require adjustable  
7 operating frequency settings for generating  
8 facilities larger than 11 KVA to assist the system  
9 during serious capacity shortages." And I  
10 interpret this to reference the PG&E  
11 interconnection handbook which describes the  
12 under-frequency set points.

13 PRESIDING COMMISSIONER PERNELL: So  
14 you're negotiating with the correct entity to  
15 address the problem.

16 THE WITNESS: Yes. I think the PUC  
17 language is sufficiently flexible to accommodate  
18 the General Electric standard. I think it's the  
19 PG&E further implementation that is the concern.

20 HEARING OFFICER VALKOSKY: So are you  
21 suggesting different language for TSE part (d),  
22 and, if so, what is it?

23 THE WITNESS: At this point I am just  
24 raising as a concern that we need to -- the  
25 applicable interconnection standards, we need to

1 work with PG&E to make sure the applicable  
2 interconnection standards are actually  
3 implementable. But at this point I don't have  
4 alternative wording. We may end up having to have  
5 applicable interconnection standards as approved  
6 or concurred with by FERC, if we end up having to  
7 go to a dispute with PG&E on this particular  
8 issue.

9 MR. CARROLL: I think -- If I could  
10 interject, I think, and this is a fairly detailed  
11 issue but we wanted to raise it today, to draw to  
12 everyone's attention, I think the question in part  
13 is what the CEC staff intends by the phrase  
14 "applicable interconnection standards." And our  
15 concern is that there may be something that the  
16 CEC intends to include within that phrase; namely,  
17 the PG&E guidebook that we're not sure we could  
18 live with, given what the turbine manufacturer is  
19 saying is acceptable.

20 So this is probably a point of off line  
21 discussion between us and the Staff, and, as  
22 Mr. Jenkins has testified, since these units are  
23 up and running all over California, there must be  
24 a way to resolve it, but we just need to make sure  
25 that we've got a mutual understanding on what that

1 resolution is.

2 HEARING OFFICER VALKOSKY: Well, I trust  
3 Staff will clarify their intent on that when they  
4 testify.

5 Okay, I'm sorry, continue.

6 BY MR. CARROLL:

7 Q Mr. Jenkins, does that complete your  
8 direct testimony here today?

9 A Yes, it does.

10 MR. CARROLL: Thank you.

11 Mr. Jenkins is now tendered for cross-  
12 examination in the area of transmission system  
13 engineering.

14 HEARING OFFICER VALKOSKY: Okay. Before  
15 we get there, that June 21st, 2002 letter from  
16 Mirant regarding SPS?

17 MR. CARROLL: Yes. This was a -- Let me  
18 distribute copies of it first.

19 HEARING OFFICER VALKOSKY: Okay. Let's  
20 mark this as Exhibit 25.

21 MR. CARROLL: This is a one-page letter  
22 that was e-mailed to Energy Commission staff on  
23 Friday of last week. It has not yet been  
24 docketed, but we will docket the signed version  
25 probably tomorrow or the next day. This was in

1 response to a question raised in the supplemental  
2 testimony filed by the Energy Commission staff  
3 with respect to whether or not Mirant intended to  
4 implement the SPS or replace the soil around an  
5 underground cable. This was an issue that  
6 Mr. Jenkins just testified to.

7 And this is written confirmation that  
8 the intent would be to implement the SPS, and,  
9 therefore, it would not be necessary to analyze  
10 the disruption to traffic and other impacts that  
11 might be associated with replacement of the soil.

12 So it is, in essence, written  
13 confirmation from Mirant, one of the matters that  
14 Mr. Jenkins just testified to.

15 HEARING OFFICER VALKOSKY: So, then, I  
16 take it this agreement to use the SPS is not  
17 incorporated in the current conditions of  
18 certification? Is that a correct assumption?

19 MR. CARROLL: I believe that is a  
20 correct -- I assume that that's correct, because  
21 otherwise -- if it was, then I don't think the  
22 Staff would have raised this as a concern.

23 So I believe the answer is no, this is  
24 not something that's currently incorporated into  
25 the conditions of certification.

1 HEARING OFFICER VALKOSKY: In your  
2 opinion, is it something that would be appropriate  
3 for incorporation?

4 MR. CARROLL: Yes.

5 HEARING OFFICER VALKOSKY: Okay. Before  
6 we get to that cross, Mr. Jenkins, on the system  
7 impact and facilities study which you submitted, I  
8 believe it was Appendix B to an Exhibit 17, my  
9 understanding of that study is that it is  
10 essentially invalid if Hunter's Point remains on  
11 line while Unit Seven remains on line; is that a  
12 correct understanding?

13 THE WITNESS: What we had was, with PG&E  
14 we had a whole series of studies. And we had a  
15 study that was dated, or misdated I should say,  
16 September 2nd, 2002. As a matter of point it  
17 should have been October 2nd, excuse me, 2001,  
18 rather than September 2nd. That study looked at  
19 both Hunter's Point and Potrero Seven on line, and  
20 the second study, February 26th, 2002, looked at  
21 with just Potrero Seven on line. So we have  
22 studies covering both conditions.

23 MR. CARROLL: And for a point of  
24 reference for the Committee that those two  
25 documents, the first document that Mr. Jenkins was



1 referring to is what has been identified as  
2 Exhibit 18, the second document being what's been  
3 identified as Exhibit 17.

4 THE WITNESS: The primary difference  
5 between the findings of the two is for stability,  
6 the stability finding was the same. For the  
7 thermal overload mitigation, the nature of the  
8 special protection scheme had to be modified to  
9 include I believe one additional generation trip,  
10 I'd have to do a comparison. There was a  
11 generation trip included in both, but that had to  
12 be modified slightly for this one, but it is a  
13 fairly minor modification.

14 The major difference is the short  
15 circuit mitigation, and the earlier study  
16 identified 51 breakers that PG&E was attributing  
17 to the project needing to be replaced. And with  
18 the second study, that number was reduced to two.

19 The reason for the reduction was without  
20 Hunter's Point power plant on line, there is less  
21 contribution to the overall system short circuit  
22 such that when Hunter's Point is down there is a  
23 reduction of short circuit and then when Potrero  
24 Seven comes up, it just replaces that duty. And  
25 so the net change is much smaller.

1 HEARING OFFICER VALKOSKY: Are you  
2 familiar with the letter which was recently  
3 docketed that's dated May 7th, 2002 from the  
4 California ISO to Mr. James Crane, senior project  
5 manager, GIS, Pacific Gas and Electric Company?

6 THE WITNESS: I am not familiar with  
7 that letter.

8 HEARING OFFICER VALKOSKY: Well, if you  
9 need a few moments to review it, that will be  
10 fine, but primarily what I'm interested in  
11 ultimately is on page five of the letter, it has  
12 study conclusions and recommendations, and I want  
13 to know your interpretation of the meaning of  
14 those elements, and I'll certainly ask the ISO its  
15 meaning when they testify too.

16 And I want to know if basically these  
17 are conditions for operation of Potrero or they  
18 are incorporated somehow in the study for exactly  
19 what the Applicant's understanding of them are.

20 THE WITNESS: Okay. I will go through  
21 each of the five. The first one is the new 115 KV  
22 underground cables are in service; that is part of  
23 our proposal and is also included as part of the  
24 PG&E study. The second is PG&E project T-655 to  
25 reinforce the Jefferson 230 to 60 KV system is in

1 service. This is one of the PG&E proposed  
2 projects that I had earlier identified or actually  
3 referenced that would address existing problems on  
4 the PG&E system.

5 Likewise, for item C, PG&E project T-656  
6 to install a second Ravenswood 230 to 115 KV  
7 transformer is in service. This is a proposed  
8 PG&E project to address a preexisting problem on  
9 the PG&E system that was also identified in our  
10 study. Item D, the two overstressed breakers, 115  
11 KV breakers, these are -- This appears to be a  
12 little bit different than what was in the PG&E  
13 study. The PG&E study had one breaker at Potrero  
14 and one breaker at San Mateo. The PG&E study  
15 referenced Potrero breaker 142 and San Mateo  
16 breaker CV 92 while the ISO document refers to two  
17 other Potrero breakers. As I sit here, I don't  
18 know which two these are.

19 Item E, this is in reference to the  
20 shutting down of Hunter's Point power plant. Now,  
21 PG&E puts a time line on here of 90 days -- Excuse  
22 me, ISO puts a time line on here of 90 days. I  
23 think the ISO has some control of that. They're  
24 the ones that specify when the system is  
25 sufficiently reliable. But this supports the

1 discussion we were saying, this would be a short  
2 interim period when both Potrero Seven would be  
3 available and Hunter's Point would still be on  
4 line.

5 HEARING OFFICER VALKOSKY: Okay. So  
6 based on paragraph E, is it a fair reading that  
7 Hunter's Point would shut down within 90 days  
8 after Potrero Seven goes on line, given that this  
9 is an ISO letter?

10 THE WITNESS: I think it's a fair  
11 reading, yes.

12 HEARING OFFICER VALKOSKY: Okay.  
13 Regarding D, you say you don't know where these  
14 breakers are. I understood that Mirant will be  
15 replacing a couple of breakers; is that a correct  
16 understanding?

17 THE WITNESS: That is correct.

18 HEARING OFFICER VALKOSKY: Okay.

19 THE WITNESS: The two breakers --

20 HEARING OFFICER VALKOSKY: Is it still  
21 questionable, then, which breakers Mirant will be  
22 replacing?

23 THE WITNESS: The breakers identified in  
24 the PG&E study were Potrero breaker 142 and San  
25 Mateo breaker 92. The ISO seems to have

1 identified two other breakers.

2 HEARING OFFICER VALKOSKY: Okay.

3 Alternative breakers rather than additional  
4 breakers?

5 THE WITNESS: Yes.

6 HEARING OFFICER VALKOSKY: Okay. Well,  
7 I guess we'll have to wait for the ISO to clear up  
8 that for us.

9 Just a couple more quick questions.  
10 What is the progress of negotiations for  
11 piggybacking on Hetch Hetchy progress? Is there  
12 an end in sight or are there just, negotiations  
13 are ongoing?

14 THE WITNESS: Mirant and Hetch Hetchy  
15 had jointly drafted a memorandum of understanding  
16 for Mirant's participation in not the full  
17 project, this was just the duct bank that one  
18 would eventually pull the cable through. It was  
19 envisioned that we would work jointly on the  
20 subsurface work, the street work, and then follow  
21 it up with a full agreement for the transmission  
22 cable.

23 And so the first agreement was  
24 envisioned to be a memorandum of understanding  
25 such that Mirant could participate in the duct

1 bank the City is building. That agreement was  
2 crafted, Mirant has indicated a willingness to go  
3 forward with that agreement, and my most recent  
4 understanding is that is still in discussion with  
5 the City about whether they can sign that  
6 agreement or not or does that agreement need to go  
7 to the full City Council, or board of supervisors,  
8 excuse me.

9 So I consider it still progressing,  
10 thought it's right now, the action item is lying  
11 with the City.

12 HEARING OFFICER VALKOSKY: Okay, thank  
13 you.

14 Ms. Minor, if you could have your  
15 witnesses address the progress of that agreement.

16 MS. MINOR: Yes, thank you.

17 HEARING OFFICER VALKOSKY: Thank you.

18 Okay. Cross-examination --

19 PRESIDING COMMISSIONER PERNELL: I have  
20 a --

21 HEARING OFFICER VALKOSKY: I'm sorry.

22 PRESIDING COMMISSIONER PERNELL: I have  
23 a question in relationship to the switch yard that  
24 you were talking about earlier in your testimony.

25 In the final analysis, who is going to

1 own that yard? Will it be PG&E?

2 THE WITNESS: It will be owned by PG&E.

3 PRESIDING COMMISSIONER PERNELL: But the  
4 switch yard is located at Hunter's Point?

5 THE WITNESS: The switch yard that I was  
6 referring to is located at Potrero. There are  
7 facilities at Potrero that are owned by PG&E, the  
8 existing switch yard, and then the power plant, on  
9 the power plant site we had proposed a second  
10 switch yard, and that switch yard will be  
11 eliminated. And everything will just be included  
12 in the PG&E switch yard.

13 PRESIDING COMMISSIONER PERNELL: But  
14 that yard would be on the Potrero site?

15 THE WITNESS: No, it would be on PG&E-  
16 owned property.

17 PRESIDING COMMISSIONER PERNELL: Where  
18 is that?

19 THE WITNESS: Physically adjacent to the  
20 Potrero power plant site.

21 PRESIDING COMMISSIONER PERNELL: Okay.  
22 And then you talk about generation dropping, and I  
23 guess my question there is if Potrero and Hunter's  
24 Point are on line and there is a need to drop  
25 generation, is it possible to drop it from

1 Hunter's Point rather than Potrero, considering  
2 the age of the plants?

3 THE WITNESS: The generation dropping  
4 that was described earlier was assuming already  
5 that Hunter's Point was not on line. This was the  
6 longer term, when Hunter's Point is not on line  
7 and there is just generation at Potrero. When we  
8 have all the generation at Potrero, then -- Oh,  
9 excuse me, all being Potrero Unit Three, Units  
10 Four, Five, Six, and the new Unit Seven -- when  
11 they are all on line and you have a 115 KV cable  
12 outage, there is potential for a thermal overload,  
13 and that would be addressed by tripping Units  
14 Four, Five, and Six.

15 PRESIDING COMMISSIONER PERNELL: Right.  
16 So this is -- Hypothetically, this is assuming  
17 that Hunter's Point is shut down?

18 THE WITNESS: That is correct. There is  
19 the earlier study that had Hunter's Point  
20 operating. PG&E had begun developing a special  
21 protection scheme for that condition when Hunter's  
22 Point was operating, but it did not carry through  
23 with all the costs estimated for that work because  
24 we decided that it was better to design a scheme  
25 ultimately understanding that Hunter's Point was



1 not going to be there.

2 PRESIDING COMMISSIONER PERNELL: Okay.

3 THE WITNESS: Also, I should point out  
4 that to have all the units running at Potrero with  
5 a total generation of 960 megawatts, and then  
6 having all the units running at Hunter's Point  
7 would be a highly unlikely generating scenario,  
8 that you would need that much generation,  
9 especially during the short time period we're  
10 talking about, between the time Potrero comes on  
11 line and Hunter's Point shuts down.

12 I've also been asked to further describe  
13 the situation after Hunter's Point is shut down.  
14 It would also be very unusual, at least in my  
15 opinion, to have all generation at Potrero on line  
16 simultaneously, given that Units Three, Four,  
17 Five, and Six are condition two RMR units that  
18 tend to be dispatched last, and only when really  
19 needed. If you're running Potrero Seven at full  
20 output, it's going to be unlikely that you're  
21 going to be running Units Three, Four, Five, and  
22 Six all simultaneously at a very high level.

23 It's not impossible, so the system needs  
24 to be designed to accommodate that, and we're  
25 managing through a special protection system

1       rather than investing a lot of capital for this  
2       low likelihood situation.

3               PRESIDING COMMISSIONER PERNELL:  Is that  
4       an ISO call?  Or is that something that Mirant can  
5       decide to run if they want to?

6               THE WITNESS:  The option two units are  
7       dispatched by the California ISO.  So we don't set  
8       the dispatch for option two units.

9               PRESIDING COMMISSIONER PERNELL:  And  
10       which ones are they?

11              THE WITNESS:  They are Potrero Three,  
12       Four, Five, and Six.

13              PRESIDING COMMISSIONER PERNELL:  Okay.

14              HEARING OFFICER VALKOSKY:  Examination,  
15       Mr. Westerfield?

16              MR. WESTERFIELD:  Thank you.

17              Mr. Jenkins, I just have a few questions  
18       on the subject of the transmission cable between  
19       the Potrero substation and Hunter's Point.

20                              CROSS-EXAMINATION

21       BY MR. WESTERFIELD:

22              Q     I have to confess, I'm a little confused  
23       about what you meant when you testified to a  
24       backup to working with the City, so what were you  
25       talking about when you talk about this backup?

1           A     The intent is not to have the City have  
2     a project and also have a separate Mirant project  
3     if it's not needed, if an arrangement can be  
4     worked out with the City. And we think it's in  
5     everyone's best interest that an arrangement be  
6     worked out, such that if that arrangement is  
7     worked out, then at that point we would no longer  
8     pursue any sort of transmission cables associated  
9     with the project.

10           However, in the event, for whatever  
11     reason, maybe the City decides not to go forward  
12     with the cable ultimately, then it would be  
13     necessary for us to have a cable for our project.

14           Q     And that situation of having your own  
15     cables, is that what you mean by backup?

16           A     Yes.

17           Q     And what would that involve?

18           A     I'm not sure I understand the question.

19           Q     Would you put in your own cables through  
20     a different route, down a different street? Would  
21     you attempt to string cables through the same  
22     conduit that the City digs? I mean, that's what I  
23     mean.

24           A     If the City doesn't go forward, we would  
25     go along as described here. If the City goes

1 forward, then we would have to --

2 PRESIDING COMMISSIONER PERNELL: Excuse  
3 me, go along as described --

4 THE WITNESS: Described in the AFC,  
5 excuse me. If the City does not construct the  
6 transmission cable, say for some reason the City  
7 decides --

8 PRESIDING COMMISSIONER PERNELL: All  
9 right. And so your backup plan --

10 THE WITNESS: Is to build --

11 PRESIDING COMMISSIONER PERNELL: -- is  
12 what's being asked about right now.

13 THE WITNESS: Yes.

14 PRESIDING COMMISSIONER PERNELL: And  
15 your explanation is to look at the AFC?

16 THE WITNESS: Well, our backup plan is  
17 to construct the transmission cables as described  
18 in our AFC.

19 PRESIDING COMMISSIONER PERNELL: All  
20 right, and what is that?

21 THE WITNESS: That is two cables from  
22 Hunter's Point to Potrero -- I would have to read  
23 the exact streets -- essentially it's down Cargo  
24 Way under Islais Creek up Illinois Avenue.

25 BY MR. WESTERFIELD:

1           Q     And I understand that to be a different  
2     route than the one the City is constructing for  
3     the Third Street light rail project; is that  
4     correct?

5           A     As the City originally proposed for the  
6     Third Street light rail, it was a different route.  
7     The City is in the process of changing their route  
8     to follow this alignment.

9           Q     All right. So it's your understanding  
10    that the City's route and the one described in the  
11    AFC as your backup plan are the same.

12          A     It's the route the City would like to  
13    take, yes. They're still working on their  
14    environmental impact report.

15          Q     Okay. So I'm still not clear what the  
16    backup plan would be if the City -- if no  
17    agreement can be worked out between Mirant and the  
18    City.

19          A     Well, there are situations whereby the  
20    City would not construct a cable. They would take  
21    service from PG&E and not build their own cable,  
22    not build their own substation. In such case we  
23    would still need the transmission cables there.  
24    The City would no longer be championing those  
25    circuits, and so we would need to have those

1 circuits constructed. And that would be our  
2 backup plan if the City does not go forward.

3 Q Okay.

4 MR. CARROLL: If I could clarify,  
5 physically the two alternatives are the same. I  
6 think the difference between the primary plan and  
7 the backup plan is the backup plan Mirant does it,  
8 the primary plan the City does it and Mirant  
9 participates.

10 BY MR. WESTERFIELD:

11 Q All right. And I guess another question  
12 for Mr. Jenkins is, is Mirant seeking  
13 certification for the backup plan?

14 A We are keeping the backup plan as part  
15 of our overall project proposal, yes.

16 MR. WESTERFIELD: That's all I have.

17 HEARING OFFICER VALKOSKY: Ms. Minor?

18 MS. MINOR: Okay.

19 Mr. Jenkins, I'm going to try to step  
20 through my questions very quickly and want to try  
21 to avoid any unnecessary duplication of the  
22 questions that have already been asked and  
23 answered. I want you to bear with me a little  
24 bit, though, because part of the difficulty with  
25 the transmission system engineering is that we saw

1 the facilities study, the one that was included in  
2 your testimony that's dated February 2002 for the  
3 first time when your testimony was filed, and the  
4 ISO letter that's dated May 7th, which apparently  
5 you hadn't seen either, we saw for the first time  
6 yesterday as well.

7 So there is some information and there  
8 are some assumptions that you've made and ISO has  
9 made that the City did not have when we filed our  
10 testimony. So I'd like to just make sure that we  
11 get some of this cleared up and get on the same  
12 page.

13 CROSS-EXAMINATION

14 BY MS. MINOR:

15 Q I'm going to ask some questions about  
16 the facilities study, if you can look at a copy of  
17 that.

18 MR. ROSTOV: Is this the February one?

19 MS. MINOR: This is the February.

20 MR. ROSTOV: Just for clarification, in  
21 Exhibit 18 I think there is a typo. It refers to  
22 a study which says September 2nd, 2002, but that's  
23 really September 2nd, 2001; on your exhibit list,  
24 right?

25 HEARING OFFICER VALKOSKY: Oh, thanks

1 for pointing it out.

2 PRESIDING COMMISSIONER PERNELL: Point  
3 well taken.

4 MS. MINOR: Okay.

5 BY MS. MINOR:

6 Q On page 34, section 12.5 of the February  
7 facilities study, that paragraph states that  
8 generation dropping alone is not a preferred  
9 mitigation option, and that, moreover, generation  
10 dropping as a mitigation option for category B  
11 overloads which are the overloads discussed above  
12 are only available if approved by PG&E and ISO.

13 So just to clarify the record today, has  
14 ISO approved the generation dropping that's  
15 proposed in this facilities study?

16 A I would say yes, but it's based upon the  
17 ISO has reviewed and approved the interconnection  
18 plan for this project. I don't think you can  
19 point to a specific line that says ISO  
20 specifically approved of the special protection  
21 system, but they have approved of the overall  
22 interconnections project.

23 Q And as far as you know, has PG&E's  
24 management approved of this proposed generation  
25 dropping?



1           A     I think -- I interpret the PG&E issuing  
2     of the study, saying that this is your cost to  
3     interconnect the project, as PG&E's approval on  
4     this plan. It is PG&E's study, it is PG&E's  
5     document.

6           Q     Okay. But the section doesn't actually  
7     say that, in fact, it has been approved?

8           A     PG&E has provided us a cross-estimate  
9     that they are working toward special facilities  
10    agreements with us that are based upon this plan.  
11    So I would interpret that PG&E has approved.

12          Q     Okay. If you could help us, just a  
13    little bit more background, particularly in view  
14    of your 20 years with PG&E, why is it that  
15    generation dropping generally is not preferred and  
16    why generally it should be avoided?

17          A     Generation dropping is nothing new, and  
18    it's been used extensively in the PG&E service  
19    area and throughout the west as a way of making  
20    higher utilization of existing transmission  
21    infrastructure. However, what was being observed  
22    by Cal ISO and by PG&E was that some projects  
23    were, relied very extensively on generation  
24    dropping, dropping -- desiring to drop very large  
25    amounts of generation and loading transmission

1 facilities up extremely high such that there was  
2 much less operational flexibility, so that as a  
3 result, the California ISO initiated in their  
4 planning standards development process some  
5 guidelines to provide guidance to the ISO, to the  
6 participating transmission owners, as to what  
7 times would a special protection system be  
8 acceptable and what times it would not be  
9 acceptable.

10 So it's more -- In and of itself, it's  
11 still a valid concept, it's still being used, but  
12 the proliferation of special protection schemes  
13 was causing some concern by the ISO. Excuse me, I  
14 said special protection schemes; really, I should  
15 say systems to be consistent.

16 Q Thank you. If you would go to page 35  
17 of the February 2002 study, and specifically  
18 looking at the Larkin E Potrero Unit One 115 KV --

19 MS. MINOR: For purposes of the record  
20 I'm pointing Mr. Jenkins to page 35, table 12-4.

21 THE WITNESS: Okay. I seem to be  
22 looking at a different page than you. My 35 looks  
23 different than your 35.

24 MR. CARROLL: I believe 34.

25 THE WITNESS: Oh, the table is 34.

1 MR. CARROLL: Yes. We're there, it just  
2 appears that maybe printer issues, the pagination  
3 is a little bit off, but we've got the table in  
4 front of us.

5 MS. MINOR: It's table 12-4, okay.

6 BY MS. MINOR:

7 Q And I'm looking at the table that's  
8 Larkin E Potrero Number One, it's 115 KV?

9 A Yes.

10 Q Okay. Now, I just wanted to make sure  
11 that I am reading this table correctly. Can you  
12 take us through this table, specifically looking  
13 at the Larkin E Potrero, and tell us what this  
14 table is telling us specifically about generation  
15 dropping.

16 A Okay. This is PG&E's table, so I'm  
17 going to have to study it a bit here.

18 Q Okay.

19 A The first column describes the actual  
20 components that PG&E assumed were lost; i.e.,  
21 experienced some sort of unplanned outage.

22 Q Okay, so that's the column entitled  
23 contingency.

24 A That's correct.

25 Q Contingency is the loss of the Larkin E

1 Potrero Number One.

2 A Yes.

3 Q Okay.

4 A The second column labeled overloaded  
5 components, this is the transmission line that, or  
6 transmission cable in this case for which it looks  
7 like data is supplied in subsequent columns. This  
8 are the cable that is experiencing the overload.

9 Q Okay.

10 A The next column is the rating of that  
11 cable and amperes, so in this case 700 amperes.

12 Q Okay, and again, that's the amps for the  
13 cable that's experiencing the overload.

14 A That's correct.

15 Q Okay.

16 A The next column is the pre-project  
17 loading and amps, so this case was showing that  
18 without the project there is already an overload  
19 on this cable of one percent.

20 The next column would be the loading on  
21 the cable if you did not have any remedial or any  
22 special protection scheme. In this case it showed  
23 that the cable for this contingency could get to  
24 1,005 amps, or 134 percent of its rating.

25 Q Okay. So that's 44 percent over.

1           A     Over, yes.

2           Q     Okay.

3           A     The next column describes the number of  
4 contingencies for which you can have an overload,  
5 and since this cable starts with an overload, it  
6 has a large number because almost any contingency  
7 would result in overload if you start with an  
8 overload.

9           Q     Okay.

10          A     And the next column describes what part  
11 of the circuit is limiting; for example, is it  
12 limited by the underground cable, is it limited by  
13 the breakers at each end of the cable or some  
14 switch component? And this column is saying that  
15 the limitation is the underground cable itself.

16          Q     Okay.

17          A     And project gen dropped to mitigate new  
18 overloads; this column says that if you rely only  
19 on generation dropping, and since you start with  
20 an overload before the project even occurs, you  
21 have to implement -- you have to drop all the new  
22 generation just to get back to where you were.  
23 And that still wouldn't resolve it because you  
24 started with an overload.

25          Q     Okay. So I need you to clarify that

1 last column again, the meaning of all. This is a  
2 contingency whereby this column that's called  
3 project generation dropping to mitigate the new  
4 overloads, and it says all; what does that "all"  
5 mean again?

6 A That would mean that if you relied  
7 solely on generation dropping, you would have to  
8 drop the entire project. This is Unit Seven.

9 Q So all of the generation being generated  
10 by Unit Seven would have to be dropped if you were  
11 relying solely on generation dropping, in order to  
12 mitigate the overload and deal with the  
13 contingency.

14 A Yes.

15 Q Okay. Now, if you go back to section  
16 12.4.1, which is on page 27, is this the same  
17 cable that we just looked at on table 12-4?

18 A Excuse me, you're looking at 12.4.1?

19 Q Mm-hmm.

20 A No, it is not.

21 Q It's not?

22 A This case, Larkin Potrero is the cable  
23 in which you're looking at the loading, where on  
24 the table we previously went, Larkin Potrero was  
25 the cable that you actually lost.

1           Q     Okay, all right. So back on page 27,  
2 looking at section 12.4.1 --

3           A     Yes.

4           Q     Okay. I understand the solution, and  
5 this is one of the solutions that will require  
6 soil testing. The letter that was introduced  
7 today, the June 21st letter, does the June 21st,  
8 2002 letter which has been introduced as  
9 Exhibit 25, does this letter relate to 12.4.1, is  
10 that one of the sections where Mirant is saying  
11 that soil replacement will not be part of the  
12 solution?

13          A     Yes.

14          Q     Okay. And so the letter, just to  
15 clarify again, the letter dated June 21, 2002,  
16 which is Exhibit 25 for the record, anyplace in  
17 the facilities study where soil replacement or  
18 soil testing is required, this letter dated  
19 June 21st relates to, and Mirant has agreed that  
20 soil replacement will not be part of the solution  
21 for mitigation?

22          A     The reason I'm hesitating is I want to  
23 make sure I understand what you're saying, soil  
24 replacement with respect to the PG&E study?

25          Q     That's correct.

1           A     Yes.

2           Q     Okay.  If you would go to page eight of  
3     the February 2002 study, and the page is made --  
4     it looks like your document is paginated  
5     differently than mine, I am looking at section  
6     four, paragraph number one.  Okay, read that last  
7     sentence, please:  "The project will be on line at  
8     this capacity the spring of 2003."

9                     This sentence seems to be talking about  
10    the Potrero Number Seven project; is that correct?

11          A     Yes.  This was, as I said, there were a  
12    series of studies that PG&E has been running over  
13    the course of at least a year, and this was an  
14    early assumption that the project would be on line  
15    by the spring of 2003.

16          Q     Okay.  So this is an error that should  
17    be corrected?

18          A     The project is no longer expected to be  
19    on line by spring of 2003.

20          Q     Okay.  When is the project not expected  
21    to be on line?

22          A     My understanding is the project will be  
23    on line the first quarter of 2005, approximately.

24          Q     From the standpoint of the system impact  
25    and facilities study, what are the consequences of



1 a delay such that Potrero Seven is not on line  
2 until the spring of 2005?

3 A Well, first off, let's look at what's  
4 the difference between spring of 2003 versus early  
5 2005. One would be the system load level,  
6 although PG&E has asserted in the study that the  
7 load was much higher than PG&E would normally  
8 study anyway. So the load level shouldn't be an  
9 issue.

10 The second thing that may be different  
11 is the interconnection of other generators, but  
12 those are governed by a queue process, so that  
13 shouldn't be an issue. The third item would be  
14 system upgrades that PG&E has planned on the  
15 system. And that's dealt with when we're talking  
16 about the two PG&E projects -- Let me get their  
17 numbers -- T-655 and 656, whether those projects  
18 would be on line or not, and by actually having a  
19 later date it's more likely those projects would  
20 be on line.

21 So, as I sit here, I think my  
22 interpretation of the study done with this  
23 assumption is still valid for the interconnection  
24 of the project. If it connected in spring of  
25 2003, the anticipation would be still work in

1 2005. We would not design interconnection that  
2 would only have a two-year life. We would expect  
3 it to work 2003 for a number of years, and so I  
4 expect that this would work.

5 Q Okay. A couple of followup questions:  
6 Is the Potrero project, Potrero Seven, in queue as  
7 far as PG&E is concerned from an interconnection  
8 standpoint? Is it currently in queue?

9 A Yes. The queue is identified in section  
10 5.1 under base case generation assumptions. And  
11 so that identifies all the projects ahead of  
12 Potrero Seven in PG&E's queue. To my knowledge,  
13 PG&E doesn't publish for public consumption a  
14 formal queue of all their projects.

15 Q I guess what I'm trying to clarify is if  
16 PG&E were doing a new facility study for another  
17 generator tomorrow, would it list the Potrero  
18 Number Seven project in queue for purposes of that  
19 study?

20 A Yes.

21 Q Okay. What do you know the status of  
22 the T-655 and the T-656? These are the PG&E  
23 reliability studies. Have they been approved by  
24 PG&E?

25 A They have been included in PG&E's

1 transmission expansion plan, which has been  
2 approved by California ISO. However, PG&E's  
3 management practice is not to actually approve the  
4 allocation of funds for projects until their  
5 engineering design construction is imminent, and  
6 so that would be based upon the lead time to get  
7 the work done. So while PG&E has included them in  
8 their transmission plan, their management has not  
9 yet budgeted the funds for this project.

10 Q Okay. Now, the February 2002 draft, is  
11 that the most recent draft of the facilities  
12 study?

13 A February 26, 2002 is the most recent  
14 revision I will call it. PG&E issued a number of  
15 drafts and then it issued a final, and then  
16 started issuing revisions to the final. So the  
17 February 26th is the last revision that PG&E has  
18 issued.

19 Q And so the February 26th is what you are  
20 considering the final facilities study?

21 A Yes. I think my view is that this study  
22 outlines the necessary facilities. We will still  
23 need to negotiate with PG&E some of the commercial  
24 issues associated with implementing these  
25 facilities, with respect to ownership and cost

1 responsibility, but those aren't necessarily  
2 technical issues, though there are some  
3 assumptions in this document related to cost and  
4 ownership that we would need to look at.

5 Q Okay. And in the February 26th, 2002  
6 version of the facilities where PG&E indicates  
7 that its management has not approved or funded  
8 either T-655 or T-656, as far as you know those  
9 are still valid statements, they have not been  
10 funded or approved by PG&E's management?

11 A Yes. It's not their practice to fund or  
12 approve projects that far in advance.

13 Q Okay. I realize that you saw the ISO  
14 May 7th, 2002 letter for the first time this  
15 morning, but I would like to ask you if you know  
16 whether the assumption that you've been asked  
17 about already today on page five of that letter,  
18 which is that Hunter's Point will be retired and  
19 off line 90 days before -- after Potrero, that's  
20 90 days after Potrero is on line, whether that  
21 assumption has been communicated by ISO to senior  
22 PG&E management?

23 A I do not know.

24 Q And are we correct in assuming it had  
25 not been communicated to you?

1           A     It had not been communicated to me  
2 personally, no. It had been communicated to  
3 Mirant. It looks like Mark Harrer is on the  
4 distribution list.

5           Q     For purposes of reviewing the facilities  
6 study and preparing your testimony, did you assume  
7 a date certain for purposes of Hunter's Point  
8 being shut down?

9           A     I assumed that it would be shut down  
10 once the ISO had determined the system was  
11 sufficiently reliable, and I envisioned that to be  
12 a demonstration by Mirant of the ability of the  
13 Potrero Seven to operate reliably, which was the  
14 shakedown period I referred to. I did not have  
15 the specific 90-day time line that the ISO had  
16 identified.

17          Q     Okay. If you can go back to the  
18 February 2002 facilities study -- I'm sorry that  
19 I've got you jumping around here -- Are you on  
20 page 22?

21          A     One clarification, if I could --

22          Q     Uh-huh?

23          A     -- I just found in the study what the  
24 breakers were, Potrero 112 and 182; is that  
25 appropriate to say something now or wait --

1 Q Yes, that would be --

2 A Okay. Those are two breakers that PG&E  
3 had identified before the project that were  
4 extremely overstressed, 69 percent and 63 percent  
5 overstressed, before our project was even there.  
6 So PG&E has identified those are something that  
7 does not meet PG&E standards even today without  
8 the project, that they would have to replace.

9 HEARING OFFICER VALKOSKY: Okay. So to  
10 put that in context, referring to the May 7th  
11 letter from the ISO, 112 and 182 are breakers that  
12 PG&E would have to replace, and Mirant will still  
13 do, what is it, 142 and 92?

14 THE WITNESS: And 92, that's actually --  
15 they're referred to earlier on the page, yes, 142  
16 and 92. That Mirant -- Those would have to be  
17 replaced before Mirant Unit Seven came on line.  
18 The actual -- who would be cost responsible for  
19 that is something to be negotiated with PG&E.

20 HEARING OFFICER VALKOSKY: Okay. Thank  
21 you for that clarification.

22 BY MS. MINOR:

23 Q Mr. Jenkins, what I want you to look at  
24 is at the bottom of page 22, at the very bottom,  
25 note, and then it carries over onto the top of

1 page 23.

2 This is PG&E's indication of the circuit  
3 breakers that would have to be replaced if  
4 Hunter's Point is, in fact, on line when Potrero  
5 Seven comes on line.

6 A This is the result of their short  
7 circuit studies, yes.

8 Q Yes, okay. Can you help us get a handle  
9 on what the cost of replacing these breakers would  
10 be if, in fact, Hunter's Point is on line when  
11 Potrero Seven comes on line?

12 A The only type of numbers I would have  
13 would be a ballpark type of number. I wouldn't  
14 have the specific cost for these breakers. But as  
15 a ballpark number, replacing a 115 KV breaker is  
16 going to cost in the neighborhood of \$400,000  
17 apiece.

18 As a matter of fact, it's not clear to  
19 me that if one really wanted to design a system to  
20 accommodate Hunter's Point and Potrero, you would  
21 actually replace all these breakers. These  
22 breakers are not heavily overstressed and there  
23 may be other engineering solutions besides brute  
24 force, changing every breaker out. There are  
25 design modifications you can make in the stations

1 to potentially manage the problem without having  
2 to change out every breaker.

3 We did not go into this with PG&E to  
4 explore this issue further, because instead we  
5 looked at the assumption of Hunter's Point being  
6 shut down. But PG&E's initial response was every  
7 breaker would need to be changed out.

8 Q So in the September 2001 study, which is  
9 Exhibit 17 for this record, you did -- PG&E did  
10 not --

11 HEARING OFFICER VALKOSKY: I'm sorry,  
12 that's Exhibit 18.

13 THE WITNESS: Eighteen.

14 HEARING OFFICER VALKOSKY: The  
15 September 2nd, 2001?

16 MS. MINOR: I thought we said it was 17.  
17 Is it 18?

18 HEARING OFFICER VALKOSKY: That's 18.  
19 Seventeen is the February 26th.

20 MS. MINOR: Okay, sorry.

21 BY MS. MINOR:

22 Q The September 2001 study did not fully  
23 evaluate whether, in fact, those breakers would  
24 have to be replaced if Hunter's Point were on  
25 line?



1           A     They evaluated that there was an  
2     overstress issue that would have to be addressed.  
3     They had also evaluated one method of addressing  
4     that overstressed situation. It did not explore  
5     alternative ways of addressing the issue.

6           Q     Okay. So your testimony is if Hunter's  
7     Point is, in fact, still on line when Potrero  
8     Seven comes on line, that Mirant with PG&E would  
9     again review the stressed breakers and make a  
10    determination as to what options are available,  
11    but would not necessarily immediately agree to  
12    replace those breakers?

13          A     That is correct. Actually, PG&E is the  
14    entity that has the information to actually do the  
15    analysis.

16                I'll give one example here to show you  
17    one way of looking at this. If you look at the  
18    September study, PG&E had indicated 54 breakers  
19    would need to be replaced. If you look at this  
20    study, the number has dropped to 42 breakers would  
21    need to be replaced. And they did this by taking  
22    a more careful look at San Mateo substation --  
23    Well, excuse me, I may have misspoken, San Mateo  
24    or Larkin, I'd have to check the numbers.

25                But they only sharpened their pencil, if

1       you will, on that one substation, and the reason  
2       they did, in my opinion, is because that  
3       substation had a number of pre-existing issues,  
4       issues prior to our project. So where it was to  
5       PG&E's benefit, they looked at sharpening their  
6       engineering pencils, but they did not look at the  
7       other stations.

8               There may be ways similarly to sharpen  
9       your pencil at the other stations and eliminate  
10      some of the breaker relief that's needed, and then  
11      for those breakers that remain there may be  
12      alternative ways of addressing it besides changing  
13      out the entire breaker.

14             Q     Okay. On page 23, the paragraph  
15      immediately below where we've just been looking,  
16      "If Mirant does not agree to accept this  
17      additional breaker replacement, Mirant's Potrero  
18      Unit Seven will not be allowed to parallel to the  
19      grid if Hunter's Point is on line"; what does that  
20      statement mean?

21             A     To me this means that, from an  
22      engineering standpoint, if Potrero Seven and  
23      Hunter's Point are both connected on line without  
24      any other mitigation, the short circuit duty will  
25      violate PG&E's engineering criteria. I would view

1 the subsequent interconnection agreements which  
2 would be reviewed by FERC, subject to FERC  
3 jurisdiction, as actually saying when and if  
4 Mirant could or could not connect to the system.

5 I view this study as more of an  
6 engineering study, the scope of work and of costs,  
7 and not necessarily the actual commercial terms of  
8 when a unit can connect and not connect.

9 Q Okay. So you don't believe that this  
10 statement represents a policy of PG&E's  
11 management?

12 A Personally, I don't, and the reason I  
13 state that is that we've also had discussions with  
14 PG&E with ways of mitigating the issue for short-  
15 term during the transition process. So PG&E is  
16 always engaged with discussions with us that  
17 aren't fully consistent with that statement.

18 I think from a long term perspective  
19 this reflects PG&E's policy, but during the  
20 transitional policy I think PG&E is flexible.

21 HEARING OFFICER VALKOSKY: Let's go off  
22 the record for a second.

23 (Brief recess.)

24 MS. MINOR: Thank you.

25 BY MS. MINOR:

1           Q     Mr. Jenkins, just a couple of more quick  
2     questions and I think we'll step through this very  
3     quickly.

4                     Do you have a copy of the September 2001  
5     study?

6           A     Yes.

7           Q     Okay.

8           A     Pardon me, which date did you say?

9           Q     Well, mine is dated September 2, 2001.

10          A     Okay, yes.

11                    HEARING OFFICER VALKOSKY:   That's  
12     Exhibit 18?

13                    THE WITNESS:   Yes.

14                    HEARING OFFICER VALKOSKY:   Yes.

15                    MS. MINOR:   Okay.   I have an extra copy  
16     if you need it.

17                    HEARING OFFICER VALKOSKY:   That's fine.

18                    MS. MINOR:   Okay.

19     BY MS. MINOR:

20           Q     Just quickly, I wanted to make sure that  
21     I understand the differences that have occurred  
22     between the September study and what is now being  
23     viewed as the final study, the February 2002  
24     study.

25                    Page 25 of the September 2001 study, and

1 this is the same project that is on page 27,  
2 12.4.1, of the February 2002 study. It's again  
3 that Larkin E Potrero 115 KV underground that  
4 we've been talking about.

5 A Yes.

6 Q Okay. Now, in the February study, the  
7 February 2002 study, the contingency plan to deal  
8 with the mitigation, to deal with the overload, so  
9 the mitigation plan for the overload involves  
10 generation dropping?

11 A In which study?

12 Q The February.

13 A In the February, yes.

14 Q Okay. When I look at the September 2001  
15 version on page 25, mitigation option two seems to  
16 suggest that an alternative was looked at  
17 involving reconductoring the cable and replacing  
18 equipment. That has dropped out of the options  
19 that were considered in the February study.

20 Can you explain, and I'll just do -- I  
21 have a similar question for several of the cables,  
22 but we'll just ask the question for purposes of  
23 the record for this one. Can you explain to us  
24 why option two was eliminated from the February  
25 study and what the consequences of that would be?

1           A     I can't say why PG&E eliminated it in  
2     this particular one. In the others they've  
3     included other potential mitigation options where  
4     they've identified replacing underground cables.

5           Q     Mr. Jenkins, you said in the others --

6           A     In the other cables.

7           Q     Okay.

8           A     In the other cables where there were  
9     overloads, PG&E has identified the replacement  
10    option as other potential mitigation options. I  
11    do not know why PG&E chose to drop that structure  
12    from this particular option.

13          Q     Now, explain to us in a little bit more  
14    detail what mitigation option two entails, what is  
15    reconductoring of the cable and replacing the  
16    equipment?

17          A     Okay. Maybe I can speculate -- Well,  
18    speculation is a little strong word. I have some  
19    understanding. Generally, when you would replace  
20    a cable, reconductor cable, reconductor is really  
21    not a descriptive word for a cable, as it would be  
22    a transmission line. You would have to pull the  
23    existing cable out of its conduit or its pie and  
24    replace it with a higher-end -- a cable with a  
25    higher capability.

1           However, this line already has a cable  
2     with a higher capability installed in the pie.  
3     And so the reason it's got a low rating or the  
4     rating it does is not because the wire or the  
5     cable is not, or excuse me, the cable is not of  
6     sufficient size, it's because there is another  
7     element underground -- I believe it's another  
8     cable -- that creates heating effects. And so  
9     they're saying that they can't use the full  
10    capability of the cable because of the heating of  
11    it due to another cable in the proximity.

12           So that was the reason for the soil,  
13    pulling the soil out and putting in a soil that  
14    would have a greater, present a greater thermal  
15    barrier between the two cables. So my estimate of  
16    what happened is they removed the option because a  
17    replacement cable isn't really the issue here  
18    because they already have a cable that has high  
19    capability here, they just can't use it all.

20           So putting a bigger one in won't get  
21    them where they would like to be. You would still  
22    have the issues of the heating from the other  
23    cable in proximity.

24           Q     In terms of overall spread system  
25    impact, how do you compare options two and options

1 three for the September 2001 report for the Larkin  
2 Potrero cable?

3 A There are many ways to compare. Is  
4 there a particular --

5 Q I'm primarily interested in impact on  
6 reliability. Which option gives us the most  
7 reliable effect on the overall grid?

8 A Okay. There are different ways to  
9 measure reliability. I don't see a difference  
10 between option two and option three in the ability  
11 to, if you will, keep the lights on for customers.  
12 The reliability impact is the reliability of the  
13 grid to be able to accept the full output of  
14 Potrero power plant such that the reliability to  
15 Potrero power plant is impacted by option three  
16 where you would use a special protection system to  
17 trip generation in the event you have a cable  
18 failure and the remaining cable is overloaded.

19 So I see it as a reliability issue  
20 potentially for the plant, but not necessarily for  
21 end-use customers in the City.

22 Q But a reliability issue for the plant  
23 could, in fact, affect keeping the lights on for  
24 the end-use customer?

25 A What we're seeing is, and again, in this



1 case, you've got full generation at Hunter's  
2 Point, you've got full generation at Potrero power  
3 plant, so you have more generation coming out of  
4 Potrero and Hunter's Point than there is load in  
5 the City, plus you have a transmission system  
6 that's able to carry a portion of the City load  
7 that under these conditions would be very lightly  
8 loaded, if at all.

9 So I would not anticipate this would  
10 create any issues for serving customers in the  
11 City.

12 Q Okay.

13 MS. MINOR: That's the extent of our  
14 questions for right now. Thank you.

15 Mr. Jenkins, thank you.

16 HEARING OFFICER VALKOSKY: Thank you,  
17 Ms. Minor.

18 One point, Mr. Jenkins, does the lack of  
19 funding for T-655 and T-656 negatively affect the  
20 probability that these projects will actually be  
21 built? The PG&E projects, you mentioned that  
22 PG&E's practice is not to fund these things? Is  
23 that an indication that they will or will not be  
24 built?

25 THE WITNESS: I consider it no

1       indication whether they will be built or will not  
2       be built, the fact that PG&E has funded them at  
3       this point. It is not their practice to fund them  
4       at this point.

5               HEARING OFFICER VALKOSKY: Okay.

6               THE WITNESS: Normally what you would  
7       base it off, PG&E's intentions, you would base it  
8       off their transmission plan they prepare for the  
9       ISO's review and approval. And they are in the  
10      ISO's approved transmission plan.

11              HEARING OFFICER VALKOSKY: Okay, thank  
12      you.

13              CBE?

14              MR. ROSTOV: I just have a very few  
15      questions.

16                           CROSS-EXAMINATION

17      BY MR. ROSTOV:

18              Q     My first question is about the switch  
19      yard. I just want to make sure I understand it.

20                   Originally Mirant proposed to build a  
21      switch yard on the Potrero site, but now Mirant is  
22      in this new change of project description, saying  
23      we're not going to build that switch yard;  
24      instead, we're going to interconnect into the  
25      switch yard and substation that's owned by PG&E on

1 PG&E's property; is that correct?

2 A Generally, it's correct. We were still  
3 interconnecting with PG&E at their Potrero switch  
4 yard and Hunter's Point switch yards before, but  
5 what we've done is I guess eliminated the switch  
6 yard that was on the Mirant property, and now all  
7 of the facilities will be located in the PG&E  
8 switch yard.

9 Q Okay, and is there an existing switch  
10 yard on the Mirant property?

11 A No, there is not.

12 Q And then I just have another question  
13 about, you made a reference to Exhibit 18, which  
14 is the September 2nd, 2001 study. I think you  
15 said that the analysis on that wasn't completed  
16 because you changed your assumptions and now the  
17 2002 study is the more complete study; is that  
18 true?

19 A The part I was referring to, PG&E had  
20 completed their identification of problems on the  
21 system and their initial identification of what it  
22 would take to fix those problems. You'll notice  
23 that none of the cost numbers are filled in. They  
24 had not developed any cost for the scope of work.  
25 It was still like it was draft.

1           And, in my opinion, if we continued down  
2       this path, we would have further negotiated with  
3       PG&E on some of the scope of work issues such that  
4       the actual number of breakers, if you will, that  
5       needed to be replaced would have been less if we  
6       continued with the study. But I look at this  
7       study setting an outside bound as to the amount of  
8       work that would need to be done. I envision it  
9       probably would have been less. And also, the cost  
10      numbers aren't here.

11           So those are the elements I say it's  
12      incomplete, still a draft.

13           Q     Okay. And then also in your testimony  
14      you said that you expect Unit Seven to be on line  
15      in the first quarter of 2005. How have you  
16      derived that expectation?

17           A     I don't derive schedules personally, I  
18      work on the transmission side. I get my  
19      information on schedules by talking with our plant  
20      development specialists who look at the time to  
21      permit a project and time to construct a project  
22      and arrive at that date. They're the ones that  
23      arrive at that date.

24           Q     Okay. And is there a name of a person,  
25      just out of curiosity?

1           A     Mark Harrer would be the project  
2 developer who would work the dates out.

3           Q     And then my final question, I'm looking  
4 at Exhibit 17 on page 35, which there's a  
5 paragraph called study updates, and as I read it  
6 it says a change in the interconnection date would  
7 trigger the need to redo this study; is that  
8 correct?

9           A     It says that a change might prompt a  
10 study, so it may or may not.

11          Q     Who would decide who would redo the  
12 study? Would it be Mirant or PG&E?

13          A     The ultimate decision would be with  
14 PG&E, but I'm sure it would be after discussion  
15 with both Mirant and California ISO.

16          Q     But this study might have to be done  
17 again, is that your testimony, because the  
18 interconnection date is wrong?

19          A     Well, as I previously identified in  
20 response to the City's questions, in my opinion I  
21 don't think the study would need to be redone due  
22 to a change in the interconnection date, if you  
23 look at the various elements that may change,  
24 cause a change in interconnection date. If there  
25 were a number of other generation projects being

1 proposed in the City that had queue positions that  
2 we needed to be concerned about, yes, that may  
3 prompt it, but --

4 Q So that's the argument you would make to  
5 PG&E, but PG&E would make the final decision?

6 A It would be -- I think I'd have to  
7 review the tariff to find out if there is a  
8 dispute resolution on who had the final decision  
9 on that, but that would be consulting with PG&E's  
10 transmission owner's tariff.

11 MR. ROSTOV: Okay, thank you.

12 HEARING OFFICER VALKOSKY: Redirect,  
13 Mr. Carroll?

14 MR. CARROLL: Yes, very few questions.

15 REDIRECT EXAMINATION

16 BY MR. CARROLL:

17 Q In response to questions from City and  
18 County of San Francisco, I want to refer back to  
19 page 34 of Exhibit 17. And there was some  
20 discussion regarding the contingency Larkin E  
21 Potrero Number One, 115 KV line, and there was a  
22 series of questions that led to the ultimate  
23 conclusion that in the event that load dropping  
24 were the exclusive measure implemented for  
25 addressing these contingencies that all of Unit

1 Seven would have to be dropped.

2 And my question would be in the study,  
3 is load dropping the only measure that is  
4 considered to address these contingencies?

5 A The answer is no. PG&E also looked at  
6 sectionalizing the bus at Potrero substation, and  
7 a combination of sectionalizing the bus and  
8 dropping Units Four through Six was sufficient.

9 Q Thank you. There was also some  
10 questioning regarding the May 7th, 2002 letter  
11 which has now been -- Well, actually, I don't  
12 think it has been identified as an exhibit, but  
13 it's the May 7 letter from Cal ISO to PG&E, and I  
14 think that there was -- the questioning wasn't  
15 exactly in these words, but I think the bottom  
16 line of the question was do you think that the  
17 assumption set forth on page five, section E of  
18 that letter, that Hunter's Point would be shut  
19 down within 90 days after Potrero Seven coming on  
20 line, I think there was a question of whether or  
21 not that had been communicated to upper management  
22 at PG&E or whether this might be a surprise to  
23 them.

24 My question to you is during the  
25 discussions and the development of the final

1 study, including the assumptions obviously behind  
2 it, is it true that PG&E was actively involved in  
3 those discussions such that this assumption would  
4 not come as a surprise to them?

5 A That is correct. We discussed  
6 explicitly the assumption that Hunter's Point  
7 would be shut down after Potrero came on line, and  
8 PG&E was willing and agreed to perform the  
9 analyses based upon that assumption, though they  
10 included some -- their technical people had  
11 included some caveats about the scope of work  
12 identified, and that's where we would have to work  
13 with their operational people to address  
14 transitional periods.

15 But yes, that should be no surprise to  
16 PG&E.

17 Q Okay. And with respect to there was  
18 some questioning again by the City and County of  
19 San Francisco related to load dropping not being a  
20 preferred method of addressing contingencies, am I  
21 to understand that your testimony is that  
22 significant load dropping without careful analysis  
23 is not a preferred method, but on a case-by-case  
24 basis load dropping may be perfectly acceptable  
25 and is frequently employed?



1           A     Let me clarify that.  Rather than load,  
2     let's say generation dropping.

3           Q     I'm sorry, generation dropping.

4           A     Yes.  Provided it is done with  
5     appropriate engineering judgment, and that was  
6     what the purposes of the guidelines that the ISO  
7     has developed are is to find what is their  
8     appropriate engineering judgment.  Using special  
9     protection systems that include dropping of  
10    generation is something that is still a valuable  
11    tool in integrating generation into the  
12    transmission system.

13          Q     And would your assumption be that the  
14    generation dropping that has been identified in  
15    the final study is supported by adequate  
16    engineering review, and it would be consistent  
17    with those guidelines?

18          A     Yes.

19               MR. CARROLL:  We have no further  
20    questions.

21               HEARING OFFICER VALKOSKY:  Recross,  
22    Mr. Westerfield?

23               MR. WESTERFIELD:  No.

24               MS. MINOR:  No.

25               MR. ROSTOV:  No.

1 HEARING OFFICER VALKOSKY: Did you have  
2 any exhibits to move, Mr. Carroll?

3 MR. CARROLL: Yes. At this time we  
4 would move the admission into the record of the  
5 following exhibits sponsored by Mr. Jenkins in the  
6 topic area of transmission system engineering:  
7 those portions of Exhibits One, Five, and Nine  
8 identified in his prepared testimony; the entirety  
9 of Exhibits 17, 18, and 25.

10 HEARING OFFICER VALKOSKY: Is there  
11 objection?

12 MS. MINOR: No objection.

13 MR. WESTERFIELD: No objection by Staff,  
14 but we do have a question about what Applicant  
15 intends to do with the May 7th letter, whether it  
16 intends to make it an exhibit, since it's been  
17 referred to.

18 HEARING OFFICER VALKOSKY: Applicant  
19 didn't bring that one up, the Committee brought it  
20 up. The Committee may notice it. I would prefer  
21 to wait to get some discussion on it from the ISO  
22 witness myself.

23 MR. CARROLL: That was my assumption.  
24 We would be happy to sponsor this letter, but I  
25 was assuming that the ISO witness would do that.

1 HEARING OFFICER VALKOSKY: Okay.

2 Objection to admission of the exhibits?

3 MR. WESTERFIELD: No, not from us.

4 HEARING OFFICER VALKOSKY: Objection  
5 from the City?

6 MS. MINOR: No.

7 HEARING OFFICER VALKOSKY: CBE?

8 MR. ROSTOV: No objections.

9 HEARING OFFICER VALKOSKY: Okay. Those  
10 exhibits are admitted.

11 Okay. Nothing else for Mr. Jenkins.  
12 Sir, normally you would be excused, but your  
13 counsel has generously offered you up to be  
14 recalled. If necessary, we'll take him up on  
15 that.

16 (The witness was excused.)

17 HEARING OFFICER VALKOSKY: Right now I'd  
18 like to recess for a very short lunch. We'll  
19 reconvene at 12:30.

20 (Thereupon, the luncheon recess was  
21 held off the record.)

22 --oOo--

23

24

25

## 1 A F T E R N O O N S E S S I O N

2 PRESIDING COMMISSIONER PERNELL: Okay.

3 We're back on the record. Mr. Valkosky?

4 HEARING OFFICER VALKOSKY: Thank you,  
5 Commissioner Pernell.6 We'll resume with Staff's panel of  
7 witnesses on transmission system engineering.8 MR. WESTERFIELD: Thank you,  
9 Mr. Valkosky.10 The Staff has two witnesses it would  
11 like to present as a panel, Mark Hesters of the  
12 Energy Commission, and Johan Galleberg of the  
13 California ISO.14 HEARING OFFICER VALKOSKY: Swear in the  
15 witnesses, please.16 THE REPORTER: Raise your right hands,  
17 please.

18 Whereupon,

19 MARK HESTERS and JOHAN GALLEBERG  
20 Were called as witnesses herein and, after first  
21 being duly sworn, were examined and testified as  
22 follows:23 MR. WESTERFIELD: While we'd like to  
24 present these witnesses as a panel, given the many  
25 references to the ISO's testimony already this

1 morning, I expect that the Committee and the  
2 public are very interested in hearing from the  
3 ISO. So we would like to take our witnesses in  
4 turn and hear from Mr. Galleberg first and then  
5 subsequently from Mr. Hesters, and present them as  
6 a panel for any cross-examination that any of the  
7 Applicant or the Intervenors may have, if that's  
8 all right.

9 HEARING OFFICER VALKOSKY: That would be  
10 appropriate.

11 MR. WESTERFIELD: All right. And then  
12 what I'd also like to do is discuss the testimony  
13 of Mr. Galleberg in a somewhat summary fashion to  
14 present an overview to the Committee of the  
15 findings of the ISO with reference to their  
16 approval of the interconnection of the Potrero  
17 Seven.

18 HEARING OFFICER VALKOSKY: And will you  
19 also be discussing the May 7th letter?

20 MR. WESTERFIELD: Yes. We can get into  
21 that. I think Mr. Galleberg's testimony, as we  
22 summarize that, will parallel very closely what is  
23 in the letter, but we certainly can address any  
24 specific questions that you may have with  
25 reference to the letter.

1 HEARING OFFICER VALKOSKY: Okay.

2 Proceed.

3 DIRECT EXAMINATION

4 BY MR. WESTERFIELD:

5 Q Mr. Galleberg, did you prepare and  
6 submit written testimony on transmission system  
7 engineering topic area?

8 A Yes, I did.

9 Q And do you work for the Cal ISO as a  
10 grid planning engineer?

11 A Yes, I do.

12 Q Could you please describe your  
13 qualifications and areas of expertise.

14 A Yes. I graduated from the Norwegian  
15 University of Technology and Science in 1998, with  
16 a master of science in electrical engineering.  
17 The next almost three years I worked for the Mid-  
18 Continent Area Power Pool, or MAPP, as a  
19 reliability engineer. I was responsible for  
20 issuing power flow and stability cases to the  
21 utilities in the upper Midwest, in addition to  
22 performing regional planning and operating studies  
23 for the MAPP membership.

24 The last two years I've worked as a grid  
25 planning engineer for the California ISO. During

1       this time, I have worked on a transmission  
2       expansion plan for both Southern California Edison  
3       and Pacific Gas and Electric. I have, in  
4       addition, also reviewed numerous generation  
5       interconnection studies for proposed generation  
6       projects all across the ISO control area. One of  
7       these is Mirant's Potrero Seven project.

8           Q     And what was the California ISO's role  
9       in evaluating the interconnection of Potrero Unit  
10      Seven with the ISO grid?

11          A     The ISO's role was to review and approve  
12      all of the interconnection studies performed by  
13      PG&E. We have worked with the Applicant and PG&E  
14      to develop study assumptions, analyze study  
15      results, and recommend mitigations for any  
16      criteria violations for the proposed generation  
17      project. This is done to ensure reliable  
18      operation of the ISO-controlled grid.

19          Q     And, Mr. Galleberg, what was your role  
20      in the project?

21          A     My role was to ensure that the ISO grid  
22      planning standards were met.

23          Q     Are you familiar with the system impact  
24      facility study report and why it was prepared?

25          A     Yes, I'm familiar with the study. The

1 purpose of it was to identify any system  
2 reliability violations and provide mitigation  
3 including interconnection cost estimate, and also  
4 identify potential congestion impacts from the  
5 project.

6 Q And so what happens if system  
7 reliability or congestion impacts are discovered?

8 A The study will identify facility  
9 additions or operational measures to mitigate any  
10 violations to the planning standards.

11 Q The study was completed by PG&E and  
12 submitted to the California ISO. What was the  
13 ISO's response?

14 A Based on this study, the ISO granted the  
15 final conditional approval of the project in a  
16 letter written on May 7th of this year.

17 MR. WESTERFIELD: We might as well just  
18 identify that letter and perhaps make it as an  
19 exhibit since we've referenced it. I think  
20 everyone has a copy of the letter.

21 Could we make it an exhibit, please,  
22 Mr. Valkosky?

23 HEARING OFFICER VALKOSKY: Now, we're  
24 talking about the May 7th, 2002 letter from the  
25 California ISO to PG&E?



1 MR. WESTERFIELD: Yes.

2 HEARING OFFICER VALKOSKY: I'll mark  
3 that as Exhibit 26.

4 BY MR. WESTERFIELD:

5 Q And, Mr. Galleberg, are you familiar  
6 with this letter?

7 A Yes, I drafted the letter myself.

8 Q Okay, and the letter that's identified  
9 as Exhibit 26, is this a true and correct copy of  
10 the letter you drafted?

11 A Yes, it is.

12 Q I'll leave that for the moment, if we  
13 may.

14 Getting back to the study, would you  
15 describe some of the important assumptions that  
16 went into it.

17 A Yes. All approved PG&E transmission  
18 reliability projects that are planned to be  
19 operational by spring 2004 are included in the  
20 studies, and the study used one- and ten-year heat  
21 wave load forecast in the summer peak cases, and  
22 also two underground 115 cables were assumed to be  
23 operational between Potrero and Hunter's Point  
24 substation.

25 Base cases also used in the study at

1 Hunter's Point power plant was modeled on line in  
2 the pre-Potrero Seven or pre-project cases, and  
3 Hunter's Point power plant was modeled off line in  
4 the post-project cases. This was based on the  
5 assumption that Hunter's Point will be shut down  
6 within 90 days of operation of Potrero Seven.

7 PRESIDING COMMISSIONER PERNELL:

8 Permanently?

9 THE WITNESS: Yes. In a study case, you  
10 just put the generation to zero. That's how we  
11 model it. It doesn't take into effect if it's  
12 shut down permanent or if it's just off for the  
13 moment. But it had no generation in both project  
14 cases.

15 BY MR. WESTERFIELD:

16 Q Now, these assumptions, Mr. Galleberg,  
17 are these realistic assumptions and could you  
18 explain why or why not?

19 A Yes, we believe these assumptions are  
20 realistic. Obviously, when you model a system  
21 two, three years out in the future, you don't have  
22 any guarantee that all of the assumptions in a  
23 study will materialize. And the approach we take  
24 is to model the system in a conservative but  
25 realistic way. For instance, to use one- and ten-

1 year heat wave load forecasts demonstrates this  
2 approach since high load tends to stress the  
3 system more.

4 When it comes to the way we modeled  
5 Hunter's Point power plant, we believe it's a fair  
6 assumption to model it on line before Potrero  
7 Seven and off line after Potrero Seven. The ISO  
8 board of governors has directed the ISO staff to  
9 work with the City of San Francisco and interested  
10 stakeholders toward the goal of closing Hunter's  
11 Point power plant.

12 We see Potrero Seven as a large step in  
13 this direction, especially when you take into two  
14 other, or two transmission projects planned for  
15 the same time frame. This is the Jefferson Martin  
16 230 KV line, currently scheduled to be operational  
17 in 2005, and also the conversion of the existing  
18 San Mateo Martin Number Four line from 60 KV to  
19 115 KV. This is scheduled late 2004.

20 But as we pointed out in our final  
21 condition of approval letter, any study  
22 assumptions might require additional study as we  
23 get closer to the operating date for Potrero  
24 Seven.

25 Q Now, my understanding is that the system

1 impact facility study really looked at basically  
2 three principal concerns or impacts, and I'd like  
3 to walk through those very quickly, summarize  
4 those very quickly, so we can have a better  
5 understanding of the basis for ISO's approval of  
6 the project. So first I'd like to address system  
7 reliability.

8 What were your conclusions about  
9 facility overloads under normal operating  
10 conditions?

11 A Under normal operating conditions with  
12 all facilities in service there were no identified  
13 overloads.

14 Q Okay. Now, the PG&E study modeled the  
15 system under two sets of outage conditions,  
16 category B and category C. Could you first  
17 explain what category B conditions are and explain  
18 your conclusions about potential overloads.

19 A Category B contingency is basically the  
20 same as a single contingency. It could be, for  
21 instance, the loss of a single transformer or a  
22 single line. Under category B contingencies there  
23 are five new overloads due to the project, and  
24 aggravation of five pre-existing.

25 And the study proposes to mitigate these

1 overloads either by planned PG&E transmission  
2 upgrades -- For instance, the additional transform  
3 bank at the Jefferson substation and also at  
4 Ravenswood substation. Or for four overloads, it  
5 proposes to use special protection systems.

6 Special protection systems or SPS as we  
7 call them are planned to mitigate these under  
8 single contingency conditions. The SPS is  
9 designed to automatically open the planned bus  
10 tie-breaker at the Potrero substation, and in some  
11 instances tripped generation from Potrero Four,  
12 Five, and Six, if any of these overloads occur.

13 All of the proposed special protection  
14 systems are according to the ISO grid planning  
15 standards and have been approved by both PG&E and  
16 the ISO.

17 Q Now, are these kinds of special  
18 protection systems typical for new generation  
19 projects?

20 A Yes, they are. Since the alternative to  
21 an SPS is often to reconductor or install a new  
22 line, the use of an SPS is a cost-effective method  
23 of integrating new generation into the grid while  
24 you maintain system reliability. It's important  
25 to point out that in the case of Potrero Seven, a

1 failure of any other proposed SPS will not cause  
2 cascading outages, and the SPS will only trip  
3 generation from Potrero Four, Five, and Six.

4 Q Okay. Moving on to category C, would  
5 you explain your conclusions with regard to the  
6 ISO category C overloads.

7 A Yes. Mitigation measures to relieve the  
8 category B overloads would also reducing the  
9 overloads associated with category C or double-  
10 element contingencies. Since the likelihood of a  
11 category C outage is less than a category B  
12 outage, the mitigation measure for these  
13 contingencies are less stringent.

14 Generation containment or operating  
15 procedures can also be used to mitigate any of  
16 these overloads.

17 Q Thank you. Now, in your opinion would  
18 generation dropping present any special concerns  
19 in light of San Francisco's electricity  
20 reliability situation?

21 A The transmission system on the San  
22 Francisco peninsula is operated today so it can  
23 withstand a number of severe single contingencies.  
24 This includes, for instance, the loss of the San  
25 Mateo Martin 230 KV cable or the loss of Potrero

1 Three. The proposed amount of generation dropping  
2 for Potrero Seven under emergency conditions is  
3 smaller than any of these existing single  
4 contingencies, and it should, therefore, not cause  
5 any negative impact on the reliability on this  
6 grid in San Francisco.

7 Q Now, this morning there was some  
8 testimony and discussion of this table 12-4 of  
9 the -- Which study was that again --

10 A February --

11 Q The February 26th study, right. And I'd  
12 like to draw your attention to that again, if we  
13 may. I think it's on page 35 of the system impact  
14 study. And we were looking at this table 12-4,  
15 and in particular the Larkin E Potrero line, and  
16 there was some discussion of what the meaning of  
17 "all" was under the last column, entitled project  
18 generation drop due to mitigate, drop to mitigate  
19 new -- What does that say?

20 A New overloads.

21 Q -- new overloads.

22 A Yes.

23 Q So could you explain for me what your  
24 understanding is of what "all" means in that  
25 column.

1           A     Yes, I think the right, far-right column  
2     describes the amount of generation from Potrero  
3     Seven that you would have to drop if any of these  
4     contingencies occur. The thing here is that this  
5     is not the proposed mitigation alternative. You  
6     see earlier in the report, they proposed to open  
7     the sectionalizing breaker at the Potrero  
8     substation and trip generation from Potrero Four,  
9     Five, and Six, instead of trip generation from  
10    Potrero Seven.

11                I think there might be several reasons  
12    for this, but one is that you would have to trip  
13    less generation than if you tripped them directly  
14    from Potrero Seven. In addition, I think the  
15    likelihood of tripping generation is way less  
16    since Potrero Four, Five, and Six don't operate  
17    very much, and Potrero Seven will, when  
18    operational, operate as the base load plant.

19                So this will reduce the likelihood of  
20    generation tripping by tripping generation from  
21    Four, Five, and Six, and not Potrero Seven, the  
22    project itself.

23           Q     So the proposed mitigation you just  
24    described, is that preferred to the idea of  
25    dropping all of Potrero Seven?



1           A     Yes.

2           PRESIDING COMMISSIONER PERNELL:   Just  
3     one point.  Now, am I to understand that this  
4     table is not the preferred mitigation?

5           THE WITNESS:  That is correct.

6     BY MR. WESTERFIELD:

7           Q     All right.  Moving on, then, if we may  
8     to the second point related to the ISO's approval  
9     of the project, that's the system dynamic  
10    stability, what are your conclusions about that?

11          A     No system instabilities were identified  
12    in the studies.

13          Q     So that's not a concern.

14          A     That's not a concern.

15          Q     And now to the third and final basis for  
16    the ISO's approval, the short circuit study  
17    result, could you explain what studies were  
18    performed and what the results were.

19          A     The short circuit studies were performed  
20    for three different scenarios.  The first was with  
21    all of the units at Hunter's Point power plant  
22    offline.  Under this scenario, three 115 KV  
23    circuit breakers and one 60 KV circuit breaker all  
24    were stressed.  Two of the 115 KV circuit breakers  
25    should be replaced by PG&E, and one 115 KV and one

1 60 KV breaker should be replaced by the Applicant,  
2 according to PG&E's breaker replacement policy.

3 The second scenario was performed with  
4 Unit Two and Three at Hunter's Point, operating as  
5 synchronous condensers, and with Unit One and Four  
6 off line. In addition, the Potrero Seven project  
7 was overstressed 34 115 KV breakers and one 60 KV  
8 breaker.

9 The third scenario was performed with  
10 Unit Two and Three, operating as synchronous  
11 condensers and with Unit One and Four on line.  
12 Under this scenario 43 115 KV breakers and one 60  
13 KV breaker were identified to be overstressed.

14 Q Okay. So, Mr. Galleberg, it sounds like  
15 these studies included the scenarios of Hunter's  
16 Point on line and Hunter's Point off line, and so  
17 included all of the possible scenarios using  
18 Hunter's Point generation on or off; is that  
19 right?

20 A Yes. We think that the first scenario,  
21 with all of the Hunter's Point units off line,  
22 represent the most realistic scenario. This is  
23 consistent with the rest of the study, and, as I  
24 think I indicated earlier, it's also consistent  
25 with the Maxwell ordinance and the ISO's goal of

1 closing Hunter's Point power plant as soon as it's  
2 not needed for reliability purposes on the  
3 peninsula.

4 Q Okay. In light of the circuit breaker  
5 studies and what you know about the project, do  
6 you have any concerns about whether the project  
7 can deliver the promised reliability benefits?

8 A The ISO think that Potrero Seven  
9 represents a very much needed source of new  
10 generation on the peninsula and will greatly  
11 improve the reliability of the system. If Potrero  
12 Seven and Hunter's Point power plant were to  
13 operate at the same time during a transition  
14 period, we believe that any reliability concern  
15 can be mitigated -- for instance, by an operating  
16 procedure.

17 Q All right. Mr. Galleberg, have you read  
18 the written testimony of Barry Flynn, which is  
19 sponsored by the City of San Francisco?

20 A Yes, I have.

21 Q Okay. At the conclusion of his  
22 testimony he makes four recommendations. Could  
23 you address those four points for me, please.

24 A Sure. I can read each of them and then  
25 address them individually. His number one was,

1 and I'll read from his testimony, "Until there is  
2 a Cal ISO approved date certain for the shutdown  
3 of the Hunter's Point power plant, the SIFS should  
4 assume that Hunter's Point power plant will be on  
5 line when the proposed Potrero Unit Seven comes on  
6 line."

7 And our, the ISO's response is that we  
8 believe this scenario is unlikely, assuming that  
9 Potrero Three, Four, Five, and Six will be  
10 operational in the future. Existing generation  
11 from Hunter's Point and Potrero Three, Four, Five,  
12 and Six, in addition to new generation from  
13 Potrero Seven, far exceeds the generation  
14 requirements for the peninsula. They would  
15 therefore think it's reasonable to assume that  
16 some of this older, less efficient generation is  
17 off during normal operating conditions.

18 However, if it turns out that generation  
19 from existing Potrero units will be unavailable in  
20 the future for some reason, generation from  
21 Hunter's Point could be needed and should be  
22 modeled at the same time as Potrero Seven. This  
23 would require a new study.

24 His number two recommendation goes like  
25 this: "Until there is a Cal ISO and FERC approved

1       date certain for the shutdown of Hunter's Point  
2       power plant, the SIFS should require that the  
3       circuit breakers that would be overstressed by the  
4       additional proposed Potrero Unit Seven must be  
5       replaced."

6               And the ISO's response is that we  
7       respectfully disagree with this statement. This  
8       is, again, due to the fact that we think it's  
9       highly unlikely that all existing generation on  
10      the peninsula, in addition to Potrero Seven, will  
11      be on line at the same time. In addition, an  
12      operating procedure could be developed to dispatch  
13      the generation on the peninsula so any breakers  
14      would not be overstressed in the case that  
15      Hunter's Point will operate at the same time as  
16      Potrero Seven.

17             Costly breaker replacement can therefore  
18      be avoided during any transition period when  
19      Potrero Seven could operate at the same time as  
20      Hunter's Point. This operating procedure could,  
21      for instance, limit the generation from existing  
22      Potrero units.

23             And going to his number three  
24      recommendation, "The SIFS should be revised to  
25      clarify whether PG&E and Cal ISO have approved an

1 SPS that may require generation dropping." And  
2 our response is that both PG&E and the ISO have  
3 approved all of the proposed SPS related to  
4 Potrero Seven.

5 This last recommendation is because of  
6 the critical electricity reliability concern in  
7 the San Francisco area, which will be addressed  
8 more specifically in testimony and will in other  
9 topic areas. No SPS shall be approved that may  
10 require generation dropping until the overall  
11 impact on the greater reliability is understood.

12 The ISO believe that the impact from  
13 this proposed SPS on the grid reliability is  
14 understood. PG&E and the ISO have concluded that  
15 any SPS failure will not cause cascading outages.  
16 As I also said earlier, all of the proposed SPS  
17 are fairly simple schemes and are according to the  
18 ISO grid planning standards.

19 In addition, the maximum amount of  
20 generation proposed to be tripped is the  
21 generation from Potrero Four, Five, and Six, or  
22 maximum around 150 megawatts, which is less than  
23 single outages contingency on the peninsula today.

24 Q Finally, do you have any opinion on  
25 whether the new interconnection configuration

1 proposed by Mirant improves the reliability of the  
2 California ISO controlled grid over their original  
3 proposal?

4 A Yes. We were glad to see the proposed  
5 ten bus ring configuration be replaced by direct  
6 lines from the plant to the existing Potrero 115  
7 KV switch yard. The proposed double bus single  
8 breaker configuration should also improve the  
9 reliability of both the plant and the transmission  
10 system, since, for instance, any bus fault now  
11 will not take out the entire Potrero Seven plan.

12 Q Mr. Galleberg, considering the new  
13 configuration as proposed by Mirant, where is the  
14 first point of interconnection with the ISO  
15 controlled grid?

16 A The first point of interconnection with  
17 now be the existing Potrero KV 115 substation.

18 Q Can you explain why that is?

19 A Because under the current proposal, the  
20 applicant is proposing to build the direct  
21 overhead transmission lines from the plant to the  
22 Potrero 115 switch yard, so that's the first  
23 substation.

24 Q Okay. And where does that place the  
25 underground cables connecting the Potrero

1       substation with the Hunter's Point substation?

2           A       The underground cables are now proposed  
3       to be built between Hunter's Point power plant  
4       and, or Hunter's Point switch yard and Potrero  
5       substation?

6           Q       And is that beyond the first point of  
7       interconnection to the ISO grid?

8           A       Yes.

9           MR. WESTERFIELD:  If I may, I'd like to  
10       turn now and present the testimony of Mr. Hesters,  
11       unless --

12           HEARING OFFICER VALKOSKY:  Okay.  I've  
13       just got a couple of questions I'd like to ask  
14       Mr. Galleberg.

15           MR. WESTERFIELD:  Fine.

16           HEARING OFFICER VALKOSKY:  
17       Mr. Galleberg, part of my question may be semantic  
18       in nature, and I'm referring to at page five, the  
19       recommendations contained in the May 7th letter  
20       which was identified as Exhibit 26, and these five  
21       recommendations are characterized as conditions.

22           Now, from my point of view, a condition  
23       is something that is a requirement placed on a  
24       project which has a method of enforcing it with  
25       penalties if it is not carried through.  What is



1 your interpretation of the word "condition"?  
2 Specifically, are these five measures something  
3 that the ISO would enforce or assure are  
4 implemented?

5 THE WITNESS: I think these five  
6 conditions are related to the study as performed  
7 by PG&E. These are all assumptions that will be  
8 in place or are planned to be in place to mitigate  
9 any criteria violations. So if any of these  
10 assumptions for some reason will not materialize,  
11 then a new study could be required.

12 HEARING OFFICER VALKOSKY: Okay. So it  
13 would just affect the need for a new study, and I  
14 mean specifically going to E, the retirement of  
15 Hunter's Point.

16 THE WITNESS: Yes. If Hunter's Point  
17 power plant is not or will not be retired after or  
18 when Potrero Seven comes on line, I'm sure some  
19 new study will have to take place.

20 HEARING OFFICER VALKOSKY: A new study  
21 will have to take place.

22 THE WITNESS: Yes.

23 HEARING OFFICER VALKOSKY: If, however,  
24 there were what we call in our parlance a  
25 condition of certification that the project not be

1 operational, that Potrero Seven not be operational  
2 within that 90-day period until Hunter's Point is  
3 shut down, then there would be no new study  
4 required; is that correct?

5 THE WITNESS: If it's longer than 90  
6 days, if it's -- and system conditions have  
7 changed, a new study will take place. Does that  
8 answer your question, or --

9 HEARING OFFICER VALKOSKY: No, that's  
10 fine.

11 Okay, continue, Mr. Westerfield.

12 MR. WESTERFIELD: Okay, thank you.

13 BY MR. WESTERFIELD:

14 Q Mark, you've already been sworn, so  
15 could you please tell us what your position is  
16 with the CEC and summarize your qualifications and  
17 area of expertise.

18 A Certainly. I'm a --

19 HEARING OFFICER VALKOSKY: Excuse me,  
20 Mr. Westerfield, I neglected Mr. Smith.

21 MR. SMITH: Good afternoon,  
22 Mr. Galleberg. I just wanted to follow on with a  
23 question or two from Mr. Valkosky.

24 What is the role, what role does Cal ISO  
25 play or what role would Cal ISO play in

1 determining if Hunter's Point is to be shut down?

2 THE WITNESS: I think the ISO's role is,  
3 we have something called RMR units, which means we  
4 can basically call on RMR units to operate when  
5 they are needed for local area reliability. And  
6 when we -- in the case we don't need Hunter's  
7 Point power plant as an RMR unit, then it can be  
8 retired.

9 Today, Hunter's Point power plant is an  
10 RMR unit, which means that it's needed for local  
11 reliability. In the future, if conditions change,  
12 if you have more transmission into the peninsula  
13 or if you have more generation, the RMR  
14 requirement goes down, and as soon as Hunter's  
15 Point power plant is not under an RMR contract, it  
16 can be shut down as far as the ISO goes.

17 MR. SMITH: Based on the studies, the  
18 study that's been done, given the assumptions  
19 would you say, would you conclude that Hunter's  
20 Point is not needed on an RMR basis?

21 THE WITNESS: I think that's a fair  
22 assumption. Obviously, we can't give any  
23 guarantee and say today that Hunter's Point power  
24 plant is not needed when Potrero Seven comes on  
25 line, because it depends upon so many other

1 things. Like I said, on the transmission projects  
2 and also load growth.

3 But we think it's very likely that  
4 Hunter's Point power plant can be shut down when  
5 Potrero Seven comes on line.

6 MR. SMITH: In your testimony, the term  
7 "realistic scenario" was used. It's a puzzling  
8 term to me, and I was wondering if you could  
9 explain what you mean by it's a realistic scenario  
10 that Hunter's Point would be shut down. I believe  
11 it was in that context.

12 THE WITNESS: Yes, that was with  
13 reference to the study assumptions, I think. When  
14 we're doing a study two, three years out in the  
15 future, we're trying to look two, three years out  
16 in the future and look at proposed transmission  
17 projects, load growth, and new generation, and  
18 then model the system based on these conditions.

19 And as it looks today, it doesn't look  
20 like Hunter's Point is needed when Potrero Seven  
21 comes on line. But I would like to point out that  
22 this is not only in the ISO's control. These two  
23 transmission projects as I understood, Jefferson  
24 Martin and also the conversion project on the San  
25 Mateo Martin Number Four line are under CPUC's, I

1 think they're assessing the need for them. So  
2 this could, of course, impact the schedule, for  
3 these projects, transmission projects.

4 MR. SMITH: Okay, and I understand that,  
5 and I appreciate the outside factors that affect  
6 those assumptions.

7 Assuming those -- Let's fast forward  
8 into the future for a second. Assuming those  
9 projects are approved and they are implemented,  
10 clarify for us what Cal ISO's function or role or  
11 steps would be in determining the need for  
12 Hunter's Point to remain on line. What are the  
13 regulatory or administrative steps that would be  
14 taken, assuming -- and also assuming all of the  
15 assumptions in your current study take place, and  
16 the conclusion is that it's not -- Hunter's Point  
17 is not needed for RMR purposes.

18 Walk us through what Cal ISO's role is  
19 at that point.

20 THE WITNESS: I think, as I said, the  
21 ISO board of governors has directed us to work  
22 towards the closure of Hunter's Point, and that's  
23 our goal. We have initiated a stakeholder study  
24 group which looks at the long-term reliability for  
25 the San Francisco peninsula -- It's called

1 something like San Francisco Long Term Phase  
2 Two -- where they look at the model of the future,  
3 2004, 2005, and see what kind of load serving  
4 capability is needed on the peninsula in the  
5 future.

6 MR. SMITH: And then what is done with  
7 that information?

8 THE WITNESS: That is published --

9 MR. SMITH: I'm trying to get at who  
10 makes the call? Who decides if Hunter's Point is  
11 shut down?

12 THE WITNESS: That is the stakeholder  
13 group, which actually is open to anyone who wants  
14 to participate, but it's ISO, PG&E are maybe --  
15 and also the City and County of San Francisco are  
16 maybe the major players which drives the process  
17 forward.

18 MR. SMITH: Okay.

19 THE WITNESS: And based on consensus  
20 and, of course, the engineering results from the  
21 studies, and based upon that they can make  
22 decisions whether or not Hunter's Point power  
23 plant is needed for reliability purposes.

24 MR. SMITH: Okay, thank you.

25 PRESIDING COMMISSIONER PERNELL: Let me

1 ask this a different way. Sorry about this.

2 MR. WESTERFIELD: That's all right.

3 PRESIDING COMMISSIONER PERNELL: My  
4 understanding is the ISO is responsible for the  
5 reliability or making assumptions on the  
6 reliability of the grid, and they have RMR  
7 contracts to ensure their reliability. And if  
8 there is a new facility, a new generating facility  
9 that has the potential of eliminating the RMR  
10 contracts, that is a call that the ISO would make.

11 THE WITNESS: That is correct.

12 PRESIDING COMMISSIONER PERNELL: And  
13 once that's done, then that will start the process  
14 of permanent closure of Hunter's Point.

15 THE WITNESS: Right.

16 PRESIDING COMMISSIONER PERNELL: But  
17 before any process starts, the ISO has to make a  
18 determination that the grid is indeed reliable.

19 THE WITNESS: Yes, that is our  
20 responsibility, to operate a grid in a reliable  
21 fashion, so it meets all of the criteria.

22 PRESIDING COMMISSIONER PERNELL: Thank  
23 you.

24 HEARING OFFICER VALKOSKY:  
25 Mr. Westerfield?

1 MR. WESTERFIELD: Thank you.

2 BY MR. WESTERFIELD:

3 Q All right. Mark, again, could you tell  
4 us, please, what position you hold with the Energy  
5 Commission and summarize your qualifications and  
6 areas of expertise.

7 A I'm an associate electrical engineer in  
8 the engineering office of the California Energy  
9 Commission. I've been there since 1998, analyzing  
10 the interconnection of new power plants and  
11 transmission systems in general. Before that I  
12 was doing generation planning in another office at  
13 the Energy Commission.

14 Q Okay. And could you describe your role  
15 in the TSE engineering subject area for the  
16 Potrero Seven project.

17 A I wrote the TSE, transmission system  
18 engineering testimony for the Staff.

19 Q Okay, and could you briefly summarize  
20 that testimony and include, if you would, your  
21 conclusions as to whether the project complies  
22 with applicable LORS and has any significant  
23 adverse environmental impacts.

24 A My original testimony was based on  
25 the -- I don't know what I want to call it -- the



1 previous interconnection that Mirant had proposed  
2 in their AFC, which was with Mirant building a  
3 switch yard that then connected to Hunter's Point  
4 and to the existing Potrero switch yard.

5 My conclusions based on that  
6 interconnection and the AFC was that if conditions  
7 of certification TSE one through eight are met,  
8 the applicable laws, ordinances, regulations, and  
9 standards will be complied with.

10 There was one change, and it actually  
11 coincides quite nicely with what the Applicant was  
12 saying earlier. We have changed our standard  
13 conditions to remove references to CPUC rule 21.  
14 Our current understanding is that that applies  
15 mostly to distribution facilities, and that is  
16 being changed to compliance with the PG&E  
17 interconnection handbook.

18 Q Okay. So maybe to elaborate on that a  
19 little bit, I think you're probably referring to  
20 one of the conditions of certification --

21 A It actually appears many places in the  
22 conditions of certification, not just one.

23 Q Okay. All right. Well, let's take one  
24 to start. I was thinking of the TSE five --

25 A Right.

1           Q     -- and I think it's -- we talked this  
2 morning about that being 5D.

3           A     That should read, "Termination facility  
4 shall comply with the PG&E interconnection  
5 handbook and applicable interconnection  
6 standards."

7           Q     Okay, and so practically speaking, what  
8 difference does that make over the way it's now  
9 written?

10          A     There is no -- CPUC rule 21 is not  
11 considered or is not part of that condition  
12 anymore.

13          Q     All right. So as far as -- So, again,  
14 the interpretation of this by the CEC is that the  
15 conditions of the handbook should be applied?

16          A     Yes.

17          Q     All right. Okay. Returning then to  
18 your I guess original testimony, are there any --  
19 I guess are there points you would like to make  
20 about your original testimony?

21          A     There have been significant changes to  
22 the project since my original testimony. I still  
23 believe -- Well, there are significant changes  
24 that we discussed in our supplemental testimony of  
25 June 12th. Beyond that, we have some other things

1       that we discussed afterwards. We had two or three  
2       days to analyze the May 29th filing because some  
3       people were out of town and missed a few things in  
4       the supplemental testimony that I'd like to  
5       discuss now.

6           Q     Okay. So why don't you go through the  
7       major points, summarize if you would the major  
8       points of your supplemental testimony that was  
9       recently filed.

10          A     Okay. Based on our analysis of the  
11       May 29th testimony of Robert Jenkins, we still  
12       believe that if the TSE conditions one through  
13       eight, conditions of certification one through  
14       eight are met, the facilities will comply with  
15       applicable laws, ordinances, regulations, and  
16       standards for transmission system engineering.

17                Our concern is that we don't have  
18       necessary -- we don't have overhead drawings and  
19       we don't have elevations and other information  
20       that might be needed for other disciplines that  
21       would then be affected by this information. We  
22       have put together a data request that we haven't  
23       sent out yet requesting this information on the  
24       new interconnection.

25                We also have some concerns about the

1 category B overloads that are identified in the  
2 new interconnection study. Most of them refer to  
3 two options. They refer to either a  
4 reconductoring option or a system protection  
5 system, or special protection system option for  
6 mitigating the overload. If the reconductoring  
7 option is chosen by the Applicant, further studies  
8 or further analysis is needed of the impacts of  
9 that reconductoring. If the special protection  
10 system is committed to, or the special protection  
11 systems are committed to, then no further analysis  
12 is needed.

13 Q And, Mr. Hesters, as I understand it,  
14 one of the exhibits filed today indicated Mirant  
15 has chosen the special protection systems option.

16 A That is for one specific overload, and  
17 they're choosing the special protection system  
18 over the -- basically, back dealing with higher  
19 conducting soil.

20 Q Okay. So when you talk about a concern,  
21 are you talking about other --

22 A Yes.

23 Q Okay, and again, could you distinguish  
24 what other overloads you're referring to.

25 A Oh, I can go through the specific.

1       There were the five overloads.  Would you like me  
2       to specify each line, or --

3           Q     No, you don't need to get into it, just  
4       as a group distinguish that from the mitigation  
5       Mirant has referred to in their recent letter, I  
6       think it's Exhibit 25.

7           HEARING OFFICER VALKOSKY:  Twenty-five,  
8       that's correct.

9           THE WITNESS:  Let me pull out the study,  
10      just so I can -- The letter refers specifically to  
11      the Larkin E, to Potrero 115 cable.  There are  
12      other contingency overloads that are referred to  
13      in the study.

14      BY MR. WESTERFIELD:

15           Q     Okay.  All right.  Are there any other  
16      modifications of your testimony in other respects?

17           A     Based on the new interconnection, Staff  
18      believes the first point of interconnection for  
19      this power plant is the Potrero substation.  In  
20      the original interconnection with the Potrero  
21      switch yard being constructed by Mirant, the  
22      Hunter's Point to Potrero cables were actually  
23      part of the -- What do I want to say -- for that  
24      part of the interconnection, the Hunter's Point  
25      substation, or switch yard, would have been the

1 first point of interconnection on that section.

2 Now, with the new direct connection to  
3 the Potrero, existing Potrero switch yard, that is  
4 the first point of interconnection, just to the  
5 Potrero, existing Potrero switch yard.

6 Q Okay.

7 A One other thing: The system reliability  
8 study that Mirant submitted on May 29th made the  
9 assumption that the Hunter's Point power plant was  
10 off line. While this is a reasonable long-term  
11 assumption for an interconnection study, Staff is  
12 concerned that there may be downstream facilities,  
13 or actually that there are conditions where  
14 Hunter's Point may not be able to be shut down, or  
15 the ISO may not be able to sanction the shutdown  
16 of Hunter's Point, in which case we would like to  
17 see a study and we are going to request a study, a  
18 sensitivity study, with Hunter's Point on line,  
19 and that's all.

20 Q Okay. Are there any modifications or  
21 changes that you would make in the area of system  
22 reliability to either of your pieces of testimony  
23 you originally authored? Any additional comments  
24 on system reliability?

25 A We'd like to see this -- I mean, we

1 don't believe that we're going to see new  
2 downstream facility or new impacts shown in the  
3 sensitivity study, but we are uncertain until we  
4 do see a sensitivity study.

5 Q Okay. All right. Based upon the new  
6 configuration offered by Mirant, are there any  
7 additional conditions of certification that Staff  
8 would recommend?

9 A Not at this time.

10 Q Okay. I think that's it. Do you have  
11 anything you would like to add to your testimony?

12 A That's all for now.

13 Q Okay.

14 MR. WESTERFIELD: So that concludes our  
15 direct testimony and we offer both witnesses as a  
16 panel for cross-examination.

17 HEARING OFFICER VALKOSKY: Okay. Just a  
18 couple of quick clarifying questions for  
19 Mr. Hesters.

20 Am I correct in understanding that in  
21 your conditions contained in Exhibit Three, which  
22 is the FSA, that what you're proposing is that  
23 every time you see CPUC rule 21, to replace that  
24 with PG&E interconnection standards?

25 THE WITNESS: Yes, it is.

1 HEARING OFFICER VALKOSKY: Okay. And  
2 just if you could help me in correcting a typo,  
3 referring to page 6.5-7, your testimony second  
4 line from the bottom, you refer to condition TSE  
5 one E --

6 THE WITNESS: That should be five E.

7 HEARING OFFICER VALKOSKY: -- five E,  
8 thank you. And on page 6.5-12, condition TSE  
9 three, you make reference to a, quote, "controlled  
10 document." Could you tell me what a controlled  
11 document is, as you're using it?

12 THE WITNESS: Let me figure out where I  
13 am.

14 PRESIDING COMMISSIONER PERNELL: Do you  
15 have a page number?

16 HEARING OFFICER VALKOSKY: Yes, it's  
17 page 6.5-12, condition TSE three, the third line  
18 up from the bottom.

19 THE WITNESS: It reads, "Discrepancy  
20 documentation shall become a controlled document  
21 and shall be submitted to the CBO for review and  
22 approval."

23 HEARING OFFICER VALKOSKY: Right.

24 THE WITNESS: I think that refers to  
25 confidentiality.



1 HEARING OFFICER VALKOSKY: So it shall  
2 become a confidential document, then? I mean, is  
3 that another way of putting it?

4 THE WITNESS: I think that's what we're  
5 saying, yes.

6 HEARING OFFICER VALKOSKY: Okay. I  
7 believe Mr. Jenkins testified that he thought it  
8 was appropriate to include the commitment by  
9 Mirant in its June 21st letter, Exhibit 25,  
10 regarding the SPS as a condition of certification;  
11 did you hear that testimony?

12 THE WITNESS: Yes, I heard it. The SPS  
13 for the Larkin E to Potrero.

14 HEARING OFFICER VALKOSKY: Right. Would  
15 you agree that that's appropriate content for a  
16 condition?

17 THE WITNESS: That is generically  
18 covered in our conditions already when under, what  
19 it is, five F where it says, "The project owner  
20 shall provide the final detailed facilities study  
21 including a description of facility upgrades,  
22 operational mitigation measures, and/or remedial  
23 action schemes."

24 It says special protection systems and  
25 remedial action schemes function the same way, and

1       rather than requiring a specific special  
2       protection system, we include it generically in  
3       here.

4               HEARING OFFICER VALKOSKY:   Okay.   So  
5       that there is no need to call that out in a  
6       specific condition --

7               THE WITNESS:   No.

8               HEARING OFFICER VALKOSKY:   -- that's  
9       what you're saying, correct?

10              THE WITNESS:   Yes.

11              HEARING OFFICER VALKOSKY:   Thank you.

12              Lastly, well, next to last, you had  
13       indicated that you're going to send out some data  
14       requests to Applicant.   When is that going to  
15       happen and what is your expected response time?

16              THE WITNESS:   We haven't worked that  
17       part out yet.   It's drafted, it hasn't -- I don't  
18       know the mechanism --

19              HEARING OFFICER VALKOSKY:   Can you give  
20       me a guideline?

21              THE WITNESS:   Say that again?

22              HEARING OFFICER VALKOSKY:   Can you give  
23       me a rough idea?   I mean, are these going out  
24       within, for example, the next few days, the next  
25       few weeks, the next few months?

1 THE WITNESS: I would expect the next  
2 few days.

3 HEARING OFFICER VALKOSKY: And the  
4 response then would be a typical 30 days, or --

5 THE WITNESS: The sensitivity study may  
6 take longer than 30 days. The rest, 30 days is  
7 probably reasonable for the rest.

8 HEARING OFFICER VALKOSKY: So as far as  
9 staff is concerned, and Mr. Westerfield, you may  
10 want to answer this rather than put Mr. Hesters on  
11 the spot, Staff is basically saying it has not yet  
12 completed its TSE analysis because of the recent  
13 changes in the project and that this topic will  
14 have to be continued, at least in that respect; is  
15 that correct?

16 MR. WESTERFIELD: I think that's fair,  
17 Mr. Valkosky. Because we only learned of it  
18 within a couple of weeks of the hearings, we have  
19 not had the chance to follow on with -- in  
20 obtaining the information needed for a full  
21 analysis, and that's what we would like to do, in  
22 a maybe expedited way, and leave the record open  
23 for TSE until we get that information and assure  
24 ourselves that we have what we need.

25 HEARING OFFICER VALKOSKY: Okay, and

1       assuming hypothetically that that happens, I take  
2       it from this little discussion that there is a  
3       very low probability that the continuation could  
4       happen at the presently scheduled July hearings;  
5       is that correct? They are scheduled I believe for  
6       the 22nd, 23rd, and 24th or thereabouts.

7               MR. WESTERFIELD: I think what you're  
8       saying is, is there a chance that we could  
9       essentially continue this until the July hearings  
10      and finish it off during the time schedule in  
11      July. I don't know if it's a low probability or  
12      not. We may be able to do that, depending on how  
13      quickly we can get a response from the Applicant.

14             HEARING OFFICER VALKOSKY: Well, and  
15      realizing that Staff would need to prefile  
16      testimony in advance of those hearings. That's  
17      what I'm wondering.

18             MR. WESTERFIELD: Well, in light of  
19      that, I think it is -- I think you're right, there  
20      is a low probability of doing that.

21             HEARING OFFICER VALKOSKY: Okay, thank  
22      you.

23             ASSOCIATE COMMISSIONER KEESE: Let me  
24      try to understand this. Staff is -- We have a  
25      proposal that would handle the temporary situation

1       until there was closure, the 90-day period in  
2       your -- That's acceptable? You don't have a  
3       problem with that? Is it -- Your scenario is that  
4       the second power plant might not shut down?

5               THE WITNESS: We're asking for a  
6       sensitivity study, in case the power plant doesn't  
7       shut down, or it is not able -- there is --

8               ASSOCIATE COMMISSIONER KEESE: And the  
9       SPS doesn't handle that, the current --

10              THE WITNESS: We don't have a study of  
11       that situation at this point, so we don't know  
12       whether SPS will handle that scenario.

13              ASSOCIATE COMMISSIONER KEESE: Are you  
14       asking for the study for the 90-day period also,  
15       or for the period after -- when there seems to be  
16       some assumption that that power plant might shut  
17       down, and you're saying in case it doesn't, that's  
18       what you want the study about?

19              THE WITNESS: Yes. The 90 days  
20       operational measures we agree with the ISO, that  
21       operational measures or SPS, they're not exactly  
22       SPS but they may be modifications to the SPS --

23              ASSOCIATE COMMISSIONER KEESE: Would  
24       handle it.

25              THE WITNESS: -- for a short period of

1 time.

2 ASSOCIATE COMMISSIONER KEESE: But if  
3 those same operational rules continued for three  
4 years, you're not sure they'd work.

5 THE WITNESS: Well, at that point  
6 they're -- Rather than reduce the output from the  
7 power plant, if it required some kind of permanent  
8 operational procedure, it may require the need for  
9 downstream facilities. And that's what we're  
10 concerned about with Hunter's Point operating. We  
11 don't know, we don't expect it to show that  
12 downstream facilities are needed.

13 Is your question what if the study --

14 ASSOCIATE COMMISSIONER KEESE: Well, my  
15 question is, if it's in the range of feasibility  
16 that Hunter's Point will not be shut down?

17 THE WITNESS: I think there are  
18 scenarios in which it would not be. I mean, part  
19 of the --

20 ASSOCIATE COMMISSIONER KEESE: Okay.  
21 Well, maybe we'll hear from the other witnesses.

22 HEARING OFFICER VALKOSKY: Okay, just  
23 a --

24 PRESIDING COMMISSIONER PERNELL: I'm  
25 sorry, because I think that's, the Commissioner's

1 line of questioning is on point, because  
2 everything that we're hearing, at least from the  
3 ISO, is that if Potrero Seven unit operates the  
4 way it's expected to, then the reliability would  
5 be there and there is no need for Hunter's Point.

6 What you're suggesting is that for some  
7 reason, we might need Potrero Seven and Hunter's  
8 Point?

9 THE WITNESS: Yes.

10 PRESIDING COMMISSIONER PERNELL: And you  
11 want to do a study, what do you call it,  
12 feasibility or --

13 THE WITNESS: Basically, a contingency  
14 analysis with Hunter's Point operating.

15 PRESIDING COMMISSIONER PERNELL: And  
16 wouldn't that over -- I mean, we also heard  
17 testimony that there is a possibility of too much  
18 generation, so where you would -- if both were  
19 operating, would that then be too much generation  
20 in the area?

21 THE WITNESS: It could be, and that  
22 might be a source of overloads, local overloads.  
23 I mean, nobody said they can guarantee the  
24 shutdown of Hunter's Point. That's why we're  
25 asking for the sensitivity. Everybody expects it

1 and everybody wants it, but nobody can guarantee  
2 it.

3 PRESIDING COMMISSIONER PERNELL: Right.  
4 Well, if --

5 ASSOCIATE COMMISSIONER KEESE: And the  
6 role of the ISO is just merely to pull the RMR  
7 categorization, which they can do as soon as there  
8 is enough -- they can arbitrarily do on a moment's  
9 notice -- I should have asked earlier -- they can  
10 just remove that status as soon as they're  
11 satisfied.

12 THE WITNESS: Right. The ISO needs to  
13 make certain that San Francisco can meet  
14 reliability criteria without Hunter's Point, and  
15 as soon --

16 ASSOCIATE COMMISSIONER KEESE: And the  
17 owners of Hunter's Point can't shut it down until  
18 that happens.

19 THE WITNESS: Exactly.

20 ASSOCIATE COMMISSIONER KEESE: And as  
21 soon as that happens, then it's up to the owners  
22 of Hunter's Point to decide whether they choose to  
23 shut down.

24 THE WITNESS: That's PG&E, and they have  
25 an agreement with the City --



1           ASSOCIATE COMMISSIONER KEESE: Well,  
2           that's what I had --

3           THE WITNESS: -- a signed agreement with  
4           the City and County of San Francisco.

5           ASSOCIATE COMMISSIONER KEESE: I think I  
6           understand that too.

7           THE WITNESS: Okay.

8           ASSOCIATE COMMISSIONER KEESE: So you  
9           accept the fact that if the ISO decides it's not  
10          needed, it will shut down.

11          THE WITNESS: Yes.

12          ASSOCIATE COMMISSIONER KEESE: Okay. So  
13          what you're questioning is the ISO, the ISO's  
14          judgment about whether it's going to be needed.

15          THE WITNESS: No, I'm just -- I mean,  
16          the ISO hasn't been able to say it's not needed  
17          yet. They've said we think it won't be needed,  
18          but we can't guarantee it won't be needed, and  
19          they've been very clear on the fact that they  
20          can't guarantee it.

21          HEARING OFFICER VALKOSKY: Right, and  
22          Mr. Galleberg, please correct me if I'm misstating  
23          your testimony, but didn't you essentially  
24          characterize the operation of Potrero Seven and  
25          Hunter's Point at the same time as an unrealistic

1 scenario?

2 WITNESS GALLEBERG: It's an unlikely  
3 scenario, assuming that you will keep the existing  
4 Potrero units operational, that Three, Four, Five,  
5 and Six will be there in the future.

6 HEARING OFFICER VALKOSKY: Okay, and  
7 Mr. Hesters, correct me if I'm mischaracterizing  
8 this, but you want a sensitivity analysis on what  
9 the ISO characterizes as an unlikely scenario; is  
10 that correct?

11 WITNESS HESTERS: Yes.

12 HEARING OFFICER VALKOSKY: Okay. Cross-  
13 examination?

14 MR. CARROLL: I have just one very brief  
15 question for Mr. Galleberg.

16 CROSS-EXAMINATION

17 BY MR. CARROLL:

18 Q Mr. Galleberg, this is a level of detail  
19 that I probably wouldn't normally get into, but  
20 since there has been so much focus on this issue,  
21 I want to make sure that we're being absolutely  
22 precise. And this goes to, again, the issue  
23 identified in study conclusion and recommendation  
24 E, the shutdown of Hunter's Point.

25 We've had a lot of discussion about that

1 and we've been a little bit loose in our wording.  
2 Sometimes we've talked about the retirement of  
3 Hunter's Point, sometimes we've talked about the  
4 shutdown of Hunter's Point. I just want to be  
5 precise. In your letter it uses the word  
6 "retire." I assume that what we mean when we're  
7 using those words is that those units at Hunter's  
8 Point are off line as opposed to meaning that they  
9 had been dismantled and carted away; is that -- or  
10 anything else; is that correct?

11 A That is correct, yes.

12 Q Okay.

13 MR. CARROLL: That was my only question.  
14 Thank you. And I had no cross-examination of  
15 Mr. Hesters.

16 HEARING OFFICER VALKOSKY: Ms. Minor?

17 MS. MINOR: Hi, Mr. Galleberg, thank  
18 you. Actually, I think this is going to go pretty  
19 quickly, because I want to ask some process  
20 questions up front, and I think if you can clarify  
21 the process questions for us it will kind of help  
22 us understand what has happened here.

23 CROSS-EXAMINATION

24 BY MS. MINOR:

25 Q There has been consistent acknowledgment

1       that shutting down Hunter's Point is just a real  
2       top priority policy-wise for the City and County  
3       of San Francisco. The ISO's letter dated May 7th,  
4       which I think you heard me say earlier this  
5       morning we received for the first time on  
6       yesterday is the first indication we have seen in  
7       any letter from ISO that there was a potential  
8       date certain for the shutdown of Hunter's Point.

9               And so I just want to clarify what the  
10       process is at ISO for approval of a system impact  
11       facility study. Is it approved by a committee or  
12       is it a series of management at ISO that approves  
13       this ISO -- this study that has now been approved  
14       and is a part of the testimony here today?

15            A     The one who signed this letter? Is that  
16       what you're asking about?

17            Q     Mm-hmm.

18            A     This regional transmission manager, my  
19       supervisor, Jeff Miller?

20            Q     Mm-hmm. And you view this letter as  
21       representing official policy of ISO?

22            A     Yes, with regards to Potrero Seven.

23            Q     Do you know whether there was any plan  
24       to advise senior management at PG&E or public  
25       officials at the City and County of San Francisco

1       that this letter had been issued and this was  
2       ISO's position?

3           A       The letter has been sent to PG&E, and  
4       it's based on a PG&E study.  So we assume PG&E  
5       management are on the same side as the one who  
6       wrote or performed the system impact facilities  
7       study.

8           Q       And do you know, with respect to the  
9       City and County of San Francisco, if any public  
10      official has been notified of ISO's position about  
11      the shutdown of Hunter's Point within 90 days  
12      after Potrero Unit Seven is on line?

13          A       I think this today is the assumption for  
14      the study.  And again, it's an assumption, and so  
15      we can't guarantee that it will be shut down 90  
16      days after operational date for Potrero Seven.

17          Q       Okay.  Are you distinguishing between an  
18      engineering assumption that's made for purposes of  
19      the study and a policy position that ISO has taken  
20      about the shutdown of Hunter's Point?

21          A       Yes, I think I will do that, because  
22      this is the side, I know the most engineering side  
23      of it, not the policy side.  But I know two  
24      letters were sent out I think to the City and  
25      County of San Francisco last summer with regards

1 to the closure of Hunter's Point power plant.

2 And we outlined some, talked about the  
3 RMR issues and some of that, and that I think  
4 deals more with the policy side of things.

5 Q Are you also aware that at the  
6 April 25th, 2002 ISO board meeting that senior  
7 officials from the City appeared and requested a  
8 date certain for the shutdown of Hunter's Point  
9 and they were not given a date certain, but  
10 instead, the ISO board directed that the City and  
11 the stakeholders groups start talking?

12 A Yes, I think -- it's a reference in my  
13 written testimony that the ISO board of governors  
14 directed ISO staff to work towards the goal of  
15 closing Hunter's Point power plant.

16 Q But, again, the ISO board has not set a  
17 date certain for the shutdown of Hunter's Point,  
18 and no recommendation has gone from the ISO staff  
19 to the board for a date certain for the shutdown  
20 of Hunter's Point?

21 A That is correct.

22 Q Okay. Would you look at the letter  
23 dated May 7th.

24 HEARING OFFICER VALKOSKY: For the  
25 record, that is Exhibit 26.

1 MS. MINOR: Yes, thank you.

2 BY MS. MINOR:

3 Q And, again, page five, the study  
4 conclusions and recommendations. The Jefferson  
5 Martin project is not alluded to as one of the  
6 conditions and recommendations that's listed here.  
7 However, I think there has been some reference to  
8 Jefferson Martin as one of the projects that would  
9 be required before Hunter's Point could be shut  
10 down.

11 Is, in fact, Jefferson Martin included  
12 as one of these study conditions and  
13 recommendations?

14 A Since this study included all projects  
15 up to 2004 and Jefferson Martin is currently  
16 scheduled for 2005, Jefferson Martin was not  
17 incorporated into the simulation studies that were  
18 performed for this interconnection study.

19 Q Okay. Now, there was testimony from  
20 Mirant today that Potrero Seven is probably, we're  
21 probably looking at an on line date at the  
22 earliest of spring of 2005. Does that change  
23 whether or not -- Does that change your testimony  
24 with respect to Jefferson Martin?

25 A No, I don't think so. The first quarter

1 of 2005 is still before Jefferson Martin.

2 Q Okay. Are there specific, and I think  
3 you have testified that there are specific  
4 guidelines and standards that ISO has developed  
5 for generation dropping.

6 A Yes.

7 Q And are they published guidelines?

8 A The policies are posted on our web site.

9 Q Okay. That specifically relate to  
10 generation dropping?

11 A You have the ISO grid planning standards  
12 that are posted on the web site.

13 Q Okay.

14 A And it's one of the things that directly  
15 affect the new generation are the guidelines for  
16 new special protection systems; that's part of the  
17 ISO grid planning standards and are posted on the  
18 web site.

19 Q Are those standards referenced in your  
20 testimony?

21 A Yes, they are.

22 Q And so in this case, in drawing the  
23 conclusion that the proposed SPS that relies on  
24 generation dropping did not adversely affect grid  
25 reliability, you used the new standards that are



1 posted on the web site in reaching that result.

2 A Yes, in evaluating the proposed system,  
3 special protection systems, we used both  
4 guidelines there.

5 Q Again, in the -- It is also your  
6 testimony, but I'm looking at Exhibit 26, which is  
7 the May 7th letter, at the bottom of page four and  
8 the top of page five, specifically scenarios two  
9 and three, where -- This is the short circuit  
10 study results -- where in both situations part of  
11 Hunter's Point is, in fact, on line, it is not  
12 clear to me from the letter or from the testimony  
13 what, in fact -- I mean, who is, in fact,  
14 responsible, if those breakers have to be  
15 replaced.

16 The testimony in this letter says it  
17 remains unclear. What does that mean?

18 A I think it's not been clarified yet  
19 because scenario one is the one that's the most  
20 likely, and whole parts of the interconnection  
21 study but the short circuit study was based on the  
22 scenario one assumption that Hunter's Point is off  
23 line.

24 Q And again, to clarify, if, in fact,  
25 Hunter's Point is on line for more than a 90-day

1 overlap period, you would expect the facilities  
2 study to be redone?

3 A If it's for a longer time period, yes.  
4 If it's a shorter time period, like 90 days or so,  
5 then operational measures can be taken to limit  
6 other generation; for instance, generation from  
7 existing Potrero units.

8 Q We've heard 90 days and you're probably  
9 okay, there are some operational things that you  
10 can do. And we've heard three years, something  
11 would have to -- So at what point do you say both  
12 units are on line, both units meaning Hunter's  
13 Point and Potrero are both on line, and,  
14 therefore, we need to redo the study?

15 A You're asking me about the specific time  
16 period, or --

17 Q A range.

18 A I think the day Potrero Seven is  
19 operational or connected to the grid, and then  
20 you -- if there are no plans of shutting down  
21 Hunter's Point, then obviously you will need to  
22 make sure that you can reliably operate the grid  
23 before Potrero Seven is connected. I am not sure  
24 if I can give a good time period, but somewhere  
25 between 90 days and a year, maybe.

1           Q     At the April 2002 ISO board meeting, ISO  
2     approved referring the Jefferson Martin line to  
3     the CPUC. Hypothetically, if, in fact, Jefferson  
4     Martin were on line before Potrero Unit Seven goes  
5     on line, what would be the impact on the  
6     facilities study?

7           A     I'm not sure if there would be any  
8     direct impact on the facilities study. What it  
9     would impact would be the generation requirement  
10    on the peninsula. Since I believe Jefferson  
11    Martin has around 385 megawatts of load serving  
12    capability, you would -- you don't need as much  
13    generation on the peninsula. But I'm not sure if  
14    it directly relates to the interconnection study  
15    of Potrero Seven.

16          Q     Do you believe that if Jefferson Martin  
17    were on line, could Hunter's Point shut down?

18          A     I think it would be a step in that  
19    direction.

20          Q     Can you be more specific in "a step"?

21          A     I can't be more specific because I think  
22    we need to study that, and the ISO has initiated a  
23    stakeholder group to deal with just that.

24          Q     Do you have any more current information  
25    about the two PG&E reliability projects, T-655 and

1 T-656? Do you have more information about the  
2 status of those projects? I think the issues that  
3 were open this morning, or have they been approved  
4 by PG&E's management? Have they been funded?  
5 Because they're both important assumptions.

6 A I don't think I have any more updates  
7 than already what Mr. Jenkins said, that they have  
8 been approved by the ISO but not by PG&E  
9 management.

10 MS. MINOR: I think that's the extent of  
11 our questions. Thank you.

12 HEARING OFFICER VALKOSKY: Thank you.

13 MS. MINOR: Thank you.

14 HEARING OFFICER VALKOSKY: CBE, you said  
15 you had a few questions?

16 MR. ROSTOV: Yes, I have just a couple  
17 of questions for Mr. Hesters.

18 CROSS-EXAMINATION

19 BY MR. ROSTOV:

20 Q So the Applicant failed to do an  
21 application for the change in the switch yard; is  
22 that true?

23 A You mean failed to file --

24 Q An amendment to their application, to  
25 their AFC?

1           A     I haven't seen one, so yes.

2           Q     Okay. So you don't believe any of the  
3 parties have received --

4           A     Beyond what was in the testimony, no.

5           Q     Okay. And in an application, that would  
6 include overhead drawings and other information  
7 that you're seeking; is that true?

8           A     Yes.

9           Q     And the normal process after that, once  
10 you have an application or amendment, then, based  
11 on that information you would have an opportunity  
12 to do data requests; is that -- if they would have  
13 done this at the start?

14          A     Yes, I've never participated in  
15 amendments of this type, so I would assume, yes,  
16 we'd get it.

17          Q     Okay, and what other disciplines do you  
18 think are impacted by this change?

19          A     The primary one would be traffic and  
20 transportation, but that's not -- it's mostly an  
21 issue of space, and whether you're digging up  
22 streets or how the substation expands, and, you  
23 know, there may be other areas, but those are the  
24 ones that jump out at me.

25          Q     What about transmission systems or the

1 topic that's next, which is -- Sorry --

2 HEARING OFFICER VALKOSKY: Transmission  
3 line safety and nuisance.

4 MR. ROSTOV: Yes, thank you.

5 THE WITNESS: I think that will be  
6 addressed later.

7 BY MR. ROSTOV:

8 Q But do you think that could be affected  
9 by this or should I -- I'll just wait.

10 A Yes, I think we have somebody here.

11 MR. ROSTOV: I guess I have a procedural  
12 question or maybe for the Committee. It seems to  
13 me that since the Applicant failed to do an  
14 amendment to the application nobody -- at least  
15 the Intervenors and it seems like Staff have not  
16 had an opportunity to look at what the actual  
17 proposal is, and then to have an opportunity to do  
18 any type of discovery data requests.

19 So I would -- I believe it might also  
20 affect transmission safety and nuisance. So I was  
21 wondering if -- I mean, I'm making a motion to  
22 request an opportunity to one, have the  
23 application amended, and then two, provide an  
24 opportunity for data requests for all Intervenors  
25 and Staff.

1 HEARING OFFICER VALKOSKY: Okay.

2 Mr. Westerfield, is this the type of thing which  
3 typically requires an amendment in the Commission  
4 proceedings?

5 MR. WESTERFIELD: I'm afraid I can't say  
6 whether it's typical or not. We have talked to  
7 the Applicant about making an amendment to their  
8 application, and the response that I think we've  
9 gotten is that that is a possibility and they may  
10 be arranging to do that.

11 HEARING OFFICER VALKOSKY: Okay.  
12 Mr. Carroll, will Applicant be making an amendment  
13 complete with -- and I'm just going to use an all-  
14 encompassing phrase -- the normal types of  
15 information, the overhead drawings, elevations,  
16 the types of things that I'm sure you've discussed  
17 with Staff, concerning the switch yard expansion?

18 MR. CARROLL: Yes. We will do that. We  
19 have discussed that with the staff and staff has  
20 expressed the desire for that, and we're perfectly  
21 willing to do that with one clarification, and I  
22 don't think you're including this on your list.  
23 We do have some concerns about the sensitivity  
24 study, for reasons that I think have been made  
25 clear in testimony today. We have some question

1 about the need to do that.

2 Even if we didn't see the need, we might  
3 be willing to do that if we thought it was  
4 feasible, but given that it's not something that  
5 we produce independently but it requires action on  
6 the part of PG&E and the ISO, and they've both  
7 indicated, including in testimony today, that they  
8 don't see any need for it, I have some real  
9 concerns about our ability to get their attention  
10 and effort focused on producing such documents.

11 So we're not willing to commit to the  
12 sensitivity study, but we are willing to submit a  
13 formal amendment showing the changes on the  
14 transmission with all of the sorts of things that  
15 you would expect to see in such an amendment,  
16 including the drawings and the elevations that  
17 have been requested, and an analysis of all of the  
18 subject areas and whether or not there are any  
19 additional impacts in those subject areas.

20 HEARING OFFICER VALKOSKY: Okay. And  
21 when will that amendment be forthcoming?

22 MR. CARROLL: I would say we could  
23 provide that within three to four weeks.

24 HEARING OFFICER VALKOSKY: Okay. So  
25 let's say approximately a month from now?



1 MR. CARROLL: Yes.

2 HEARING OFFICER VALKOSKY:

3 Approximately?

4 MR. CARROLL: Within that time period.

5 Perhaps earlier.

6 HEARING OFFICER VALKOSKY: Okay. And  
7 that will be followed by a period of discovery,  
8 which anything is available. Where we're going to  
9 end up today on this topic is obviously holding  
10 off because we're not going to close the record on  
11 it today. I mean, unless someone has a revelation  
12 that they're keeping from me, I don't see how we  
13 can do it.

14 I would like -- We have a conference  
15 scheduled at the conclusion of the July hearings,  
16 so I would like an update from the parties on the  
17 progress of this amendment. Also, any parties  
18 submitting legitimate discovery requests, I'll  
19 direct you to do it as quickly as possible.  
20 Because we're not going to use this as a method to  
21 delay or to prolong getting to the heart of this  
22 matter.

23 So I could give you 15 days from the  
24 time the amendment is submitted for any discovery  
25 requests, with a 15-day response time.

1           PRESIDING COMMISSIONER PERNELL: Anybody  
2 have any questions on that?

3           Okay.

4           HEARING OFFICER VALKOSKY: Okay. Sorry,  
5 did you have any more cross-examination?

6           MR. ROSTOV: No, I didn't.

7           HEARING OFFICER VALKOSKY: Okay. I've  
8 just got two more questions and, let's see, for  
9 Mr. Hesters.

10           Did I understand you to testify at one  
11 point that the existing conditions were sufficient  
12 to ensure compliance with LORS?

13           THE WITNESS: The existing conditions  
14 don't refer specifically to any facilities. They  
15 basically require conformance with LORS, and, as  
16 written, they ensure compliance with LORS and  
17 without requiring specific facilities.

18           HEARING OFFICER VALKOSKY: Okay.  
19 Directing your attention once again to the by now  
20 fabled Exhibit 26 and the last five  
21 recommendations on page five, are those  
22 recommendations, in your opinion, the type of  
23 thing that either are included or should be  
24 included in proposed conditions of certification?

25           THE WITNESS: They're covered under, and

1       this was one thing I wanted to add, was when you  
2       asked about TSE one E on 5.67, it should be TSE  
3       five F, not five E. TSE five F requires -- Let me  
4       quote exactly, but I've said it once before -- it  
5       requires a description of all facilities and  
6       remedial action schemes, special protection  
7       systems that are required for interconnection by  
8       the ISO as part of the -- and PG&E as part of the  
9       detailed facility study. These conclusions and  
10      recommendations would all be implemented through  
11      that.

12               HEARING OFFICER VALKOSKY: Okay. So, in  
13      other words --

14               THE WITNESS: They're covered.

15               HEARING OFFICER VALKOSKY: -- they are  
16      covered currently?

17               THE WITNESS: Yes.

18               HEARING OFFICER VALKOSKY: Thank you.

19               Redirect, Mr. Westerfield?

20               MR. WESTERFIELD: No redirect, thank  
21      you.

22               HEARING OFFICER VALKOSKY: Okay, thank  
23      you.

24               Staff, sir, you have exhibits to move?

25               MR. WESTERFIELD: Yes. Staff would like

1 to move into the record Exhibit 19, which is  
2 Mr. Galleberg's written testimony; Exhibit 21B,  
3 which is Mr. Hesters' supplemental testimony on  
4 TSE; as well as the relevant portion of Exhibit  
5 Three, the FSA, related to TSE; as well as the  
6 fabled Exhibit 26.

7 HEARING OFFICER VALKOSKY: Is there  
8 objection to admission of those designated  
9 exhibits?

10 MS. MINOR: No.

11 HEARING OFFICER VALKOSKY: No objection,  
12 they're admitted.

13 The Committee thanks and excuses the  
14 witnesses.

15 (The witnesses were excused.)

16 HEARING OFFICER VALKOSKY: Ms. Minor,  
17 proceed with your witness.

18 MS. MINOR: Thank you.

19 PRESIDING COMMISSIONER PERNELL: Do you  
20 have enough room, Ms. Minor?

21 MS. MINOR: Yes, we're making room.

22 PRESIDING COMMISSIONER PERNELL: Will  
23 you swear the witnesses, please.

24 THE REPORTER: Gentlemen, could you  
25 stand and raise your right hands, please.

1       Whereupon,

2               EDWARD SMELOFF and BARRY FLYNN

3       Were called as witnesses herein and, after first  
4       being duly sworn, were examined and testified as  
5       follows:

6               MS. MINOR:   The City has two witnesses  
7       for the topic area transmission system  
8       engineering, both of whom have submitted written  
9       testimony, Barry Flynn and Ed Smeloff.  We are  
10      presenting them as a panel, although they are  
11      covering different topic areas.  And so I think  
12      what I'll do is go through the direct testimony  
13      for each of them, and then tender them as a panel  
14      for cross-examination.

15              And we'll start with Barry Flynn.

16                      DIRECT EXAMINATION

17       BY MS. MINOR:

18              Q       Would you please state your name,  
19      professional qualifications, and experience for  
20      the record.

21              A       My name is Barry Flynn.  I'm the founder  
22      and principal of Flynn Resource Consultants, Inc.,  
23      a consulting firm which specializes in generation  
24      and transmission planning, municipal utility  
25      management, negotiation and management of

1 wholesale power contracts, and project  
2 development, financing and management.

3 Prior to founding Flynn Resource  
4 Consultants, I was president of Applied Power  
5 Technology, a privately held renewable resource  
6 and development company. Prior to that I was  
7 director of electric utility for the City of Santa  
8 Clara, a municipal utility. And prior to that a  
9 senior transmission planning engineer for PG&E.

10 I earned a bachelor of science degree in  
11 electrical engineering from the University of  
12 California at Berkeley and a master's degree in  
13 electrical engineering from the University of  
14 Santa Clara. I am registered with the State of  
15 California as a professional electrical engineer.

16 Q Are you the same Barry Flynn who  
17 submitted written testimony in this case that has  
18 been filed with the CEC?

19 A Yes, I am.

20 Q Is there a correction in your testimony  
21 on line four -- on page four, line ten that you  
22 would like to make?

23 A Yes, there is. My testimony listed  
24 section 12.4.2 of the facilities study as one of  
25 the sections of that study that relied on

1 generation dropping is a typographical error. The  
2 correct reference is to section 12.4.1 of the  
3 facilities study.

4 Q Are there any other changes or  
5 corrections that you would like to make to your  
6 testimony?

7 MR. CARROLL: I'm sorry, could I ask, I  
8 didn't get the number, the correction.

9 MS. MINOR: Sure.

10 BY MS. MINOR:

11 Q Would you go over the correction one  
12 more time.

13 A Sure.

14 MS. MINOR: It's page four, line ten of  
15 his filed testimony --

16 BY MS. MINOR:

17 Q -- and if you would state for the record  
18 the correction?

19 A In my testimony it listed section 12.4.2  
20 as one of the sections that relied on generation  
21 dropping. I believe the reference should be to  
22 section 12.4.1.

23 MR. CARROLL: Thank you.

24 BY MS. MINOR:

25 Q Are there any other clerical or

1       typographical corrections that you'd like to make  
2       in your testimony?

3           A     No, there are not.

4           Q     Okay, thank you.  You have heard  
5       testimony from the Cal ISO witness related to  
6       generation dropping.  In view of that testimony,  
7       do you have any comments about the use of  
8       generation dropping for contingency B mitigations?

9           A     Yes, the fact that the ISO indicates  
10      that they've completely studied this and found  
11      that there are no cascading outages for category B  
12      contingencies eliminates one of the concerns I had  
13      at the time I prepared my testimony, and about  
14      whether the ISO had, in fact, approved the system  
15      protection scheme.

16                So the fact that it's been clarified,  
17      that both the ISO and PG&E have approved it and  
18      that they've ran studies that indicate there are  
19      no problems in terms of cascading outages means  
20      that I would defer to their professional judgment.

21          Q     At the time you prepared your testimony,  
22      had you had an opportunity to review the Cal ISO  
23      written testimony in this case?

24          A     No, I had not.

25          Q     At the time you prepared your testimony,



1 had you received a copy of what is now marked as  
2 Exhibit 26, which is the ISO letter dated May 7th?

3 A No, I had not.

4 Q Mr. Flynn, would you summarize for us  
5 the concerns that you have about the facilities  
6 study, and it's the February 26th, 2002 facilities  
7 study?

8 A Well, they continue to be that the study  
9 assumes that the Hunter's Point power plant will  
10 be off line before the proposed Potrero Seven  
11 project is on line. Nobody has indicated that  
12 that is not an issue that continues to be out  
13 there, and the study refers to -- defers the  
14 replacement of up to 41 115 KV circuit breakers  
15 that will be overstressed once the proposed  
16 Potrero Unit Seven project comes on line.

17 And that's also based on the assumption  
18 that the Hunter's Point power plant will be off  
19 line before the Potrero Seven is on line. There  
20 does not appear to be adequate basis for this  
21 assumption that the Hunter's Point power plant  
22 will be off line before the proposed project is on  
23 line.

24 Q In view of your concerns, what  
25 recommendations did you make?

1           A     The recommendations would be that until  
2     there is an approved date certain for the shutdown  
3     of Hunter's Point power plant that the facilities  
4     study assume that the Hunter's Point power plant  
5     will be on line when the Potrero Seven comes on  
6     line. And until the ISO and FERC have approved a  
7     date certain for the shutdown of Hunter's Point  
8     power plant that the facilities study require that  
9     the circuit breakers that would be overstressed by  
10    the addition of the proposed Unit Seven must be  
11    replaced.

12          Q     Do you have any further testimony?

13          A     No, I do not.

14          Q     Any further comments?

15          A     No.

16                MS. MINOR: That's the conclusion of the  
17    direct testimony for Mr. Flynn. Any questions of  
18    him or shall I proceed with Mr. Smeloff?

19                PRESIDING COMMISSIONER PERNELL: Why  
20    don't you proceed and then we'll take them as a  
21    panel.

22                MS. MINOR: Okay. The City's next  
23    witness is Ed Smeloff, who has already been sworn  
24    in.

25    BY MS. MINOR:

1           Q     Would you please state your name,  
2 professional qualifications, and current position.

3           A     My name is Ed Smeloff. I'm the  
4 assistant general manager for Power Policy  
5 Planning and Resource Development at the San  
6 Francisco Public Utilities Commission. In that  
7 capacity I'm responsible for conducting and  
8 developing a comprehensive review of San  
9 Francisco's energy requirements and determining  
10 what investments would be required in  
11 infrastructure, including generation transmission  
12 and demand-side management to meet the long-term  
13 needs and to provide an optimal mix of resources  
14 for reliability and reasonably priced electric  
15 service.

16                 I'm also responsible for developing  
17 strategic partnerships with other entities to  
18 promote reliability and improved environmental  
19 quality in San Francisco, and creating an  
20 operational and organizational structure at the  
21 PUC to enhance its effectiveness in electricity  
22 markets.

23                 Prior to coming a year ago to the Public  
24 Utilities Commission, I worked for four years as  
25 the executive director of the Pace Law School

1 energy project in White Plains, New York, where I  
2 supervised a staff of attorneys, economists, and  
3 policy experts working on electricity policy in  
4 the mid-Atlantic region; specifically, with the  
5 states of New Jersey, New York, and the two ISOs  
6 in that area of the country.

7 Prior to that, I served with  
8 Commissioner Pernell on the board of the  
9 Sacramento Municipal Utility District. I was  
10 there from 1987 to 1997. I served two years as  
11 the board president, and oversaw the policy  
12 matters that SMUD was involved in.

13 I have a bachelor's degree in Russian  
14 from the University of California at Davis, and a  
15 master's degree in public administration from the  
16 University of Southern California.

17 Q Thank you. Have you previously  
18 submitted written testimony dated June 12th, 2002  
19 in this matter?

20 A Yes, I have.

21 Q Your testimony today is fairly narrow.  
22 Would you please update the Committee by first  
23 describing the transmission project that the San  
24 Francisco Public Utilities Commission has planned  
25 between Hunter's Point and Potrero, and then

1 include the status of any discussions that are  
2 ongoing with Mirant.

3 A Yes. The San Francisco Public Utilities  
4 Commission is participating with the municipal  
5 railway in providing for the infrastructure along  
6 Third Street to both energize the railway and to  
7 provide an alternative way for the City to meet  
8 municipal load. The City has under plans a  
9 substation just to the south of Islais Creek, and  
10 we would put in a circuit to energize that  
11 substation.

12 Currently, I've just checked in and we  
13 had encountered some operational difficulties, or  
14 I should say municipal railway with their  
15 contractor, and proceeding with the boards under  
16 Islais Creek to effectuate this project. I've  
17 just learned today that we are going to be able to  
18 move forward on that and be able to complete the  
19 third bore underneath the creek which is going to  
20 allow for the duct bank that we intended to put in  
21 place for our circuit.

22 You've seen testimony or a letter,  
23 excuse me, from now an acting director of the  
24 Hetch Hetchy Water and Power Enterprise, at that  
25 time the director of retail services, Marla

1 Jurosek, which indicated that we had previous  
2 conversations with Mirant about their  
3 participation in funding the duct bank that would  
4 go along Third Street. The Hetch Hetchy Water and  
5 Power Enterprise does not currently have  
6 sufficient funds in its budget to finance this  
7 project, and the City had been looking for  
8 alternative sources of funding.

9           Since that letter was sent to Mirant,  
10 we've also received correspondence from Pacific  
11 Gas and Electric Company that's indicated their  
12 interest in also participating in this project and  
13 to discuss with us mutually beneficial ways to be  
14 able to both finance the project and to share in  
15 the ownership of that project. We're currently  
16 looking and discussing with PG&E their  
17 participation in the project.

18           It's our intent to complete the duct  
19 bank and to have this as a City resource that we  
20 can use both for our proposed substation and to  
21 provide additional reliability for the San  
22 Francisco grid.

23           Q     Would you more specifically describe for  
24 the record the date of the letter from Marla  
25 Jurosek that is attached to your written testimony

1 as Exhibit B.

2 A Yes, the letter is dated September 5th,  
3 2001.

4 Q And it's to Mark --

5 A And it's to Mark Harrer, Mirant Americas  
6 Development, Inc., project director, Western  
7 Region.

8 Q Do you have any further testimony today?

9 A No, I don't.

10 Q Any further comments?

11 A No.

12 Q All right.

13 MS. MINOR: We've completed direct  
14 testimony and we will tender both of these  
15 witnesses for cross-examination.

16 HEARING OFFICER VALKOSKY: A couple of  
17 quick questions for Mr. Smeloff.

18 I think that the City favors Mirant's  
19 use of the Hetch Hetchy line; is that a correct  
20 statement?

21 THE WITNESS: Currently we're looking at  
22 all potential options for use of that line. The  
23 City has just recently, as part of its resource  
24 plan, entertained the possibility of developing  
25 its own generation in that area of the City, and

1 we would reserve the right at this point in time  
2 to use that line for what best meets the City's  
3 purposes.

4 HEARING OFFICER VALKOSKY: Okay. When  
5 will the City decide what best meets its purposes?

6 THE WITNESS: We are still in the  
7 process of putting together a long-range  
8 electricity resource plan, which we intend to  
9 bring to the board of supervisors. It's my  
10 expectation that we would have a decision on this  
11 in the next several months.

12 HEARING OFFICER VALKOSKY: Okay.

13 Cross-examination?

14 PRESIDING COMMISSIONER PERNELL: I have  
15 just one --

16 Mr. Smeloff, you indicated that you are  
17 in discussions with Mirant for some discussions  
18 with your duct bank; is that --

19 THE WITNESS: We had previously a draft  
20 memorandum between Mirant and the City as a way of  
21 providing financing for the work on the duct bank,  
22 and we have subsequently entered into  
23 conversations with PG&E on also obtaining  
24 resources and funding to complete the project.

25 PRESIDING COMMISSIONER PERNELL: All



1 right. So I'm just trying to get the relationship  
2 between Mirant, PG&E and the City, and you're in  
3 discussions with them, but yet you want to own --  
4 the City will own the line because you have  
5 expectations of additional generation that you  
6 might need?

7 THE WITNESS: Well, it was always our  
8 intent to own the line and to lease the line to  
9 Mirant or to use the line for our own purposes.  
10 We had not intended to sell that line to another  
11 entity.

12 HEARING OFFICER VALKOSKY: Okay. So it  
13 would be, I mean, the relationship would be a  
14 lease relationship with Mirant.

15 THE WITNESS: Correct.

16 HEARING OFFICER VALKOSKY: And that's  
17 what -- you're in discussions now along those  
18 lines.

19 THE WITNESS: Well, currently we are in  
20 discussions on obtaining the funding to be able to  
21 complete the installation of the duct bank. The  
22 final approval of any lease or any use of the  
23 transmission line with Mirant would be subject to  
24 the San Francisco board of supervisors' approval,  
25 and they would, in my judgment, look at that in

1 tandem with the ordinance that they passed, the  
2 conditions, the approval of this project.

3 PRESIDING COMMISSIONER PERNELL: And you  
4 indicated that the City has embarked upon a long-  
5 range energy plan?

6 THE WITNESS: That's correct.

7 PRESIDING COMMISSIONER PERNELL: Does  
8 that plan include the closing of Hunter's Point?

9 THE WITNESS: That is the highest  
10 priority for San Francisco is the expeditious  
11 closure of Hunter's Point, and any resources that  
12 we would put in place would have to reach that  
13 objective for it to be accepted by the mayor and  
14 by a board of supervisors.

15 PRESIDING COMMISSIONER PERNELL: So you  
16 wouldn't -- well, the City wouldn't oppose the  
17 closure if Potrero Seven through the ISO is found  
18 to be reliable and reliable for the grid, this  
19 region of the -- that the reliability of the grid  
20 in this region is sufficient for the City?

21 THE WITNESS: It's our view that Potrero  
22 Seven may be one option to reach the goal of  
23 closing down Hunter's Point. We think there are  
24 other ways of achieving that objective as well.  
25 And I must say, I think we are concerned about the

1       timeliness of achieving this. Beyond the  
2       licensing, there are obstacles related to  
3       financing any electricity projects and identifying  
4       for any developer, including the City,  
5       creditworthy buyers of the electricity.

6               PRESIDING COMMISSIONER PERNELL: Okay.  
7       And then one final question, and I think this is  
8       for Mr. Flynn.

9               Mr. Flynn, I thought I heard you say  
10       that Hunter's Point will be closed before Potrero  
11       Seven comes on line?

12              THE WITNESS: I don't believe my opinion  
13       is any different than what you've heard from a lot  
14       of people here, that that is the expectation, but  
15       there is no certainty. So basically what I was  
16       saying is don't assume that in your system impact  
17       studies when you cannot assure that such an event  
18       will occur at this point.

19              PRESIDING COMMISSIONER PERNELL: Well,  
20       but hypothetically, if such an event occurred,  
21       what would that do for the reliability of the  
22       grid? Maybe I should be asking the ISO guy this,  
23       but in terms of if Hunter's Point shut down,  
24       Potrero comes up, and for whatever reasons during  
25       the testing stages they're not up 100 percent,

1       where does that leave San Francisco? I guess my  
2       point is, if you shut down Hunter's Point without  
3       having Potrero up and running and reliable, so  
4       that the ISO can take off the RMRs, does that  
5       leave a void in the reliability of the system?

6               THE WITNESS: If you went ahead and  
7       replaced the breakers, then there would be no  
8       problem in doing that. The concern is  
9       overstressing the breakers with the simultaneous  
10      operation of the plants.

11             PRESIDING COMMISSIONER PERNELL: Right,  
12      okay. So there has to be a close correlation  
13      between the closing of Hunter's Point and the  
14      bringing up of a new generation facility on line  
15      so that you won't overstress the breakers.

16             THE WITNESS: Yes.

17             PRESIDING COMMISSIONER PERNELL: Okay.

18             ASSOCIATE COMMISSIONER KEESE:  
19      Mr. Smeloff, let me just understand, duct bank,  
20      I'm assuming we're talking about --

21             THE WITNESS: The conduit.

22             ASSOCIATE COMMISSIONER KEESE: -- the  
23      conduit.

24             THE WITNESS: Mm-hmm, right.

25             ASSOCIATE COMMISSIONER KEESE: And a

1 line runs through it.

2 THE WITNESS: That's correct.

3 ASSOCIATE COMMISSIONER KEESE: We were  
4 using, I heard duct bank and line almost  
5 interchangeably here. Are you suggesting that  
6 more than one person might own the duct bank?

7 THE WITNESS: No, I'm not. I'm  
8 suggesting that the City of San Francisco through  
9 the Hetch Hetchy Water and Power Enterprise would  
10 own the duct bank. The question is how would we  
11 finance --

12 ASSOCIATE COMMISSIONER KEESE: And  
13 you're looking for financing from PG&E and Mirant?

14 THE WITNESS: We're looking for  
15 financing for it and we've had discussions with  
16 both PG&E and Mirant.

17 ASSOCIATE COMMISSIONER KEESE: But they  
18 wouldn't have an ownership, they would just --

19 THE WITNESS: They would have rights to  
20 an eventual transmission line that was pulled  
21 through that duct bank, but not necessarily  
22 ownership.

23 ASSOCIATE COMMISSIONER KEESE: Okay, and  
24 if they ran -- Then the use of the word "line."  
25 If they ran a line through it, they would own that

1 or you would own that?

2 THE WITNESS: It's envisioned now that  
3 the City would own that line.

4 ASSOCIATE COMMISSIONER KEESE: Okay, and  
5 you might run one also for your MUNI.

6 THE WITNESS: The plans are that there  
7 would be two circuits, one that would be looped  
8 through our proposed substation, and then the  
9 other to provide the additional reliability  
10 between Hunter's Point and Potrero.

11 ASSOCIATE COMMISSIONER KEESE: Okay.  
12 Thank you. That straightened that out in my mind,  
13 thank you.

14 HEARING OFFICER VALKOSKY: Mr. Carroll?

15 MR. CARROLL: Thank you.

16 CROSS-EXAMINATION

17 BY MR. CARROLL:

18 Q Mr. Smeloff, you mentioned in your  
19 direct testimony that one of the things that the  
20 City was considering in its long-term energy plan  
21 would be development of the generation. Can you  
22 expand a little bit about, upon what that proposal  
23 might look like?

24 A We're currently evaluating the  
25 possibility of siting as much as 150 megawatts of

1 generation on property that's currently owned by  
2 the Port of San Francisco near what's known as  
3 Pier 80.

4 Q Okay. So that would be 150 megawatts of  
5 natural gas-fired generation.

6 A That would be natural gas-fired  
7 combustion turbines.

8 Q And then additional generation -- And  
9 that would be the extent of natural gas-fired  
10 generation that the City would develop in the  
11 energy plan?

12 A There are other projects that we are  
13 looking at with other developers, one at Mission  
14 Bay with the University of California, and then  
15 one in the downtown, at the downtown network that  
16 would replace augment boilers that are operated  
17 currently for the steam supply of downtown.

18 Q So combining all of those, can you give  
19 me an estimate, then, on what the total generation  
20 capacity would be for those projects?

21 A The total generation for that could be  
22 250 megawatts.

23 Q Okay.

24 MR. CARROLL: I have no further  
25 questions. Thank you.

1           PRESIDING COMMISSIONER PERNELL: Just  
2 one followup, Mr. Smeloff, is there a time line  
3 for the development of those 250 megawatts?

4           THE WITNESS: We are moving very quickly  
5 in discussions internally within the City on the  
6 port property at Pier 80 that I mentioned. We  
7 also have discussions underway with both the  
8 University and NRG.

9           In our energy plan, we prospectively  
10 forecasted the year 2005 as the date for the  
11 projects at Mission Bay and NRG. We have a  
12 concern that's driving the interest in the other  
13 project, the 150 megawatts, and that is  
14 reliability issues associated with the planned  
15 lengthy outage at Potrero Unit Three, which Mirant  
16 is contemplating as part of compliance with the  
17 Clean Air Act and retrofit of that unit.

18           Absent that unit, and particularly the  
19 timing of when that unit is taken off line and  
20 PG&E's plans for reconductoring the Martin line  
21 four raises some reliability concerns for San  
22 Francisco, so we're looking at ways that we can  
23 both increase reliability during that period and  
24 then have a reliable low-cost source of generation  
25 for the long term.



1 PRESIDING COMMISSIONER PERNELL: Okay.

2 HEARING OFFICER VALKOSKY: Cross-  
3 examination?

4 MR. WESTERFIELD: Yes, please. Staff  
5 does have a few questions for Mr. Smeloff, please.

6 CROSS-EXAMINATION

7 BY MR. WESTERFIELD:

8 Q Mr. Smeloff, I believe you testified you  
9 could report that the City will be able to  
10 complete the third bore and duct bank; you just  
11 learned that.

12 A That's correct.

13 Q And I'm still a little confused about  
14 the scope or extent of the construction we're  
15 talking about here, and I wish you'd fill me in on  
16 what you meant by that.

17 A It was a critical component of the  
18 project is getting under Islais Creek, and that  
19 had been an issue for a couple of months, whether  
20 or not we were going to be able to complete that  
21 third bore. So I reported that based on the  
22 information my staff has given me, we will be able  
23 to do that.

24 To be able to complete the project in  
25 its entirety to get to the Hunter's Point switch

1 yard, we will need to obtain some additional  
2 funding. And the project is intended to be  
3 conducted in tandem with the development of light  
4 rail along Third Street so that we have the  
5 benefit of the street being torn up and trenched  
6 at the same time we're putting in the duct banks.

7 Q Okay. So when we're talking about a  
8 third bore, we're just talking about a portion of  
9 this line that needs to be constructed, which is  
10 essentially just the portion under Islais Creek;  
11 is that correct?

12 A That's correct.

13 Q So put in perspective for me how much of  
14 that entire underground construction has now been  
15 completed, in relation to what needs to be  
16 completed in order to put through this  
17 interconnection line.

18 A Well, my understanding is that the  
19 entire span is 2.4 miles, and we've now completed  
20 it up to Islais Creek. I don't have, although we  
21 can get you the exact length of span that's been  
22 completed so far.

23 Q I don't need the exact footage, but some  
24 sense of how much, is it ten percent, 50 percent,  
25 90 percent?

1           A     Probably a third, more or less.

2           Q     Okay. A third has been completed,  
3 generally speaking.

4                     All right, and when would you expect the  
5 construction of all the bores, including the third  
6 bore under Islais Creek, to be finished?

7           A     The bore under Islais Creek I'm told  
8 could be finished as soon as two to three weeks  
9 from now. The remaining construction is  
10 contingent on our ability to obtain funding. So  
11 we are having these, as I described, conversations  
12 with PG&E currently to identify a source of  
13 funding.

14          Q     So you expect in the near term to have  
15 the bores constructed under Islais Creek.

16          A     That's correct.

17          Q     But then it's indefinite as to when the  
18 rest of the underground construction will take  
19 place for the entire line.

20          A     That's correct.

21          Q     Is there any time table in the City's  
22 plans for having that done?

23          A     No definite time table at this point,  
24 no.

25          Q     Is there any kind of estimate or

1 projection?

2 A No, there isn't.

3 Q It's all -- It sounds like it's really  
4 all contingent on arranging for the financing.

5 A That's correct.

6 Q Clarify for me, if you will, why the  
7 City needs three bores instead of one bore and  
8 what it's going to do with each bore.

9 A Well, one of the bores is to provide the  
10 control systems for the light rail system, and the  
11 other is -- I'm not the system engineer, so I'm  
12 not quite sure what the third is being used for,  
13 and so I would have to seek clarification from my  
14 staff on that.

15 Q Okay. So you really can't tell us why  
16 you need three at this moment.

17 A I can't, no.

18 Q Presumably, one or some of them will be  
19 used for the purposes of the light rail system.

20 A That's right.

21 Q And then some of them would be used for  
22 this interconnection line between Potrero  
23 substation and Hunter's Point; is that right?

24 A That's right.

25 Q And do you know essentially how that's

1 going to be laid out, which portion is going to be  
2 for what?

3 A It's my understanding that the third  
4 line, the one that was being bored at this point,  
5 was the one that was going to be dedicated for the  
6 transmission line that we intended to put in  
7 place.

8 Q Okay. So as far as you know now, there  
9 is no sort of technical impediment to doing that,  
10 it's really a financial one.

11 A That's correct.

12 Q Okay. Now, I think you had also  
13 testified about the intention of the City to own  
14 the lines, the interconnection cable --  
15 transmission line, if you will -- and I'm trying  
16 to understand sort of what its plans are for doing  
17 that. And so is it part of the City project to  
18 essentially install the duct bank, conductor the  
19 line, and essentially put all the infrastructure  
20 in place to run the Third Street light rail  
21 project and the interconnection line between the  
22 substations and then lease that to Mirant, if you  
23 indeed plan to do that, if that goes through?

24 A It's our intent to put one circuit that  
25 would be used with our new proposed substation to

1 serve additional City load within that area of the  
2 City in which we -- there is a significant amount  
3 of port property and potential additional load  
4 there.

5 Then there would be sufficient space in  
6 the duct bank to have a second 115 cable that  
7 would be made available for either Mirant or PG&E  
8 to provide support and the financing for.

9 Q And when you say, I think you were  
10 talking about the space you were making available  
11 in contrast to a line you're making available; is  
12 that right?

13 A Well, we would need to -- there would be  
14 sufficient space for a line. We would need to pay  
15 for a line to bring an additional cable through  
16 the duct bank.

17 Q Okay. But your plans are to put in one  
18 line as it is for transmission of electricity.  
19 Would your plans include leasing any of that line  
20 to either PG&E or Mirant, for example, for the  
21 Potrero Seven project?

22 A No, the single circuit we would put in  
23 would not be leased, that would be for our own  
24 purposes.

25 Q Okay. So should the financing be

1 arranged, then PG&E or Mirant would have to  
2 essentially conduct or string its own line to  
3 complete this interconnection, or finance --

4 A Or contract where that's financed for --  
5 we would need to work out the arrangements for the  
6 ownership of that line, and then arrange for the  
7 financing to pay for the pulling of the cable.

8 Q All right. Would that need to be done  
9 in conjunction with the underground construction  
10 that's going down Third Street, where you're  
11 putting in the space for all these lines?

12 A It's my understanding that the actual  
13 cable pull could be done after the trenching work  
14 is complete.

15 Q So you can go forward essentially with  
16 the trenching work and all the underground work  
17 and so forth that might actually disrupt traffic  
18 and have some kind of surface effects, and finish  
19 all that and then at a later point in time get  
20 these lines conductored or run, if you will, in  
21 the underground conduit.

22 A That's correct.

23 Q And is there a schedule existing for  
24 doing this underground construction work that will  
25 involve the digging up of the streets and laying

1 the conduit?

2 A There is a schedule that is being --  
3 that is managed by the Municipal Railroad for the  
4 installation of the Third Street light rail line.

5 Q So even though there is not a schedule  
6 for the actual line pulling, there is a schedule  
7 for the actual construction work that would make  
8 it possible.

9 A There is a construction schedule for the  
10 light rail line, which we would then dovetail with  
11 in the laying of the duct bank.

12 Q Right, and what is that schedule?

13 A I don't have the details of that  
14 schedule at my hands here. That's the schedule  
15 that's been developed by the Municipal Railway,  
16 but we could provide that for the Staff.

17 Q Yes, I think Staff would be very  
18 interested in that because, obviously, it's the  
19 trenching and the digging up of the streets that  
20 has the potential for any environmental impacts  
21 associated with the construction of the  
22 transmission line.

23 HEARING OFFICER VALKOSKY: Will you  
24 commit to providing that within a week?

25 THE WITNESS: We can do that within a



1 week.

2 MR. WESTERFIELD: Thank you very much.

3 That's all I have.

4 ASSOCIATE COMMISSIONER KEESE: Let me  
5 ask a question, though. If and when Mirant wants  
6 to use these end points for their transmission,  
7 would the City -- would Mirant have a right to the  
8 use of this duct bank or would the City require  
9 the use of this duct bank for their transmission,  
10 or would the City grant them a new ability to go  
11 through and put another duct bank through the  
12 streets?

13 THE WITNESS: There wouldn't be the, as  
14 I understand, the physical space for an additional  
15 duct bank. So one of the options would be for the  
16 City and Mirant to arrive at terms that are  
17 acceptable to the board of supervisors, that are  
18 consistent with the Maxwell ordinance that would  
19 allow us to lease space on a transmission line  
20 through the duct bank that would be laid along  
21 Third Street.

22 An alternative for them would be an  
23 alternative route that didn't require the use of  
24 that duct bank.

25 ASSOCIATE COMMISSIONER KEESE: And the

1 City's preference probably would be to use a duct  
2 bank that was there, rather than see a new one  
3 installed, or what -- I mean, does the City try to  
4 consolidate these things, or --

5 THE WITNESS: Well, to the extent we can  
6 reach a reasonable and economic agreement --

7 ASSOCIATE COMMISSIONER KEESE: Economic  
8 agreements.

9 THE WITNESS: -- that's consistent with  
10 the Maxwell ordinance, it makes more sense for the  
11 City to not tear up multiple portions of the City  
12 to install a transmission line.

13 ASSOCIATE COMMISSIONER KEESE: Thank  
14 you.

15 PRESIDING COMMISSIONER PERNELL: Well,  
16 we certainly don't want to negotiate that  
17 agreement here.

18 (Laughter.)

19 PRESIDING COMMISSIONER PERNELL: Let me  
20 just ask a question from me in terms of timing,  
21 and I think that this is certainly important for  
22 our proceedings. Given the fact that you don't  
23 have a realistic idea of how long it's going to  
24 take to complete this work and the fact that the  
25 Applicant is at least looking at possibly using

1       that transmission line that goes from Hunter's  
2       Point to Potrero Seven, do you think that it would  
3       be timely to keep the project on line?

4               I'm hearing a time line of '05, I guess,  
5       for the -- is what I've heard today. So are you  
6       comfortable that you would have this transmission  
7       line and the additional information in case there  
8       has to be some environmental impacts and all of  
9       that done?

10              THE WITNESS: We will provide you with  
11       the Municipal Railway schedule for their  
12       construction, but it's my understanding that their  
13       goal was to have the light rail system completed  
14       by late spring of 2003.

15              PRESIDING COMMISSIONER PERNELL: And  
16       would that be -- Let me just ask Mr. Carroll,  
17       would that be, time-wise for us in what we're  
18       doing and where you need to go if there is  
19       approval by the Commission, is that enough time  
20       for you to complete the project?

21              MR. CARROLL: Yes. We believe it would  
22       be. We have, obviously, a number of outstanding  
23       issues related to the cable and the relationship  
24       between the City and Mirant on the cable, but we  
25       don't view the timing to be one of those, and

1       that's for the reason that Mr. Smeloff just  
2       mentioned, which is that our understanding has  
3       always been and continues to be that the Third  
4       Street light rail project needs the cable there  
5       well in advance of the time that Mirant would need  
6       the cable there.

7               So our contemplation and assumption has  
8       been that the project would be completed in a  
9       timely fashion to meet the needs of Potrero Unit  
10      Seven.

11             PRESIDING COMMISSIONER PERNELL:   Okay.  
12      So timing is not an issue here.

13             MR. CARROLL:   We don't believe so.

14             PRESIDING COMMISSIONER PERNELL:   Okay.

15             HEARING OFFICER VALKOSKY:   CBE?

16             MR. ROSTOV:   I just have two questions.

17                       CROSS-EXAMINATION

18      BY MR. ROSTOV:

19             Q     One, there is a scenario where you'll  
20      build these duct banks and put a transmission line  
21      in for the City's purposes, and then, for whatever  
22      reason, you will not be able to reach an agreement  
23      with Mirant and they will not have a right to --  
24      for example, they won't be able to meet the  
25      requirements of the Maxwell ordinance.

1 I mean, there is a situation where you  
2 could build this duct bank, have one transmission  
3 line for City purposes and not have Mirant have a  
4 second line in; is that true?

5 A The second line would be subject to  
6 approval by -- we would take this from the PUC to  
7 the board of supervisors, and if the board of  
8 supervisors decided not to approve any agreement  
9 with Mirant, then that is true. That is a  
10 scenario that you can see is a possibility.

11 Q Okay. I'm just a little unclear on your  
12 testimony regarding the PG&E upgrades in  
13 transmission lines and its relation to Unit Three.  
14 Can you just explain that a little better? You  
15 were just talking about I think a timing issue.

16 A It wasn't related to PG&E. I stated  
17 that the City is looking at the -- Well, the City  
18 is looking at the outage of Potrero Unit Three,  
19 which could be scheduled for sometime in 2004 as  
20 was mentioned by I guess yesterday a witness that  
21 even in 2003, simultaneously PG&E is planning to  
22 reconductor one of the transmission lines coming  
23 from San Mateo to Martin that would take out a 60  
24 KV line.

25 We're concerned at the City to have,

1 during this period of time, adequate reliability,  
2 so we're looking at what our options are, which  
3 include 150 megawatts of City-owned generation.

4 MR. ROSTOV: Thank you.

5 HEARING OFFICER VALKOSKY: Redirect,  
6 Ms. Minor?

7 MS. MINOR: No redirect, thank you.

8 HEARING OFFICER VALKOSKY: Okay.  
9 Further questions for these witnesses? Any  
10 parties?

11 The Committee thanks and excuses the  
12 witnesses.

13 (The witnesses were excused.)

14 HEARING OFFICER VALKOSKY: Do you have  
15 any exhibits?

16 MS. MINOR: Just two. I would offer  
17 their testimony as exhibits.

18 HEARING OFFICER VALKOSKY: Okay.

19 MS. MINOR: We would like to offer as  
20 exhibits Mr. Smeloff's testimony, which is listed  
21 as Exhibit 20B into the record, Ed Smeloff's  
22 transmission system engineering testimony with two  
23 attachments attached thereto, the first being his  
24 curriculum vitae, the second being a letter dated  
25 September 21st from Marla Jurosek. And then we

1 would also like to offer the testimony of Barry  
2 Flynn, Exhibit 20A, regarding transmission system  
3 engineering, with one attachment, his curriculum  
4 vitae, attached as Exhibit A.

5 HEARING OFFICER VALKOSKY: Is there any  
6 objection to admitting those?

7 MR. CARROLL: No objection.

8 HEARING OFFICER VALKOSKY: Seeing no  
9 objection, they are admitted.

10 This topic, as I mentioned before, will  
11 remain open. We'll have an update by the parties  
12 at the conference scheduled for the conclusion of  
13 the July hearings. But at this time, is there any  
14 public comment on the topic of transmission system  
15 engineering?

16 There is no public comment. We'll  
17 recess for ten minutes and reconvene with the  
18 final topic of the afternoon.

19 (Brief recess.)

20 HEARING OFFICER VALKOSKY: Okay. On the  
21 record. Final topic, transmission line safety and  
22 nuisance.

23 We have a witness from Applicant, a  
24 witness from Staff, and cross-examination solely  
25 from CBE; is that correct? That's correct, okay.

1           Mr. Carroll, present your witness,  
2           please.

3           MR. CARROLL: Thank you. Before we get  
4           to Mr. Jenkins, with your indulgence I'd like to  
5           provide a little explanation of what we were  
6           planning to do and get the Committee's  
7           concurrence.

8           As mentioned earlier this morning, our  
9           witness, Mr. Pearson, who lives in Denver, was  
10          delayed, or not delayed, he was prevented from  
11          being here today due to travel complications.  
12          I've conferred with all of the parties, and they  
13          have all indicated that they did not plan on  
14          cross-examining Mr. Pearson and would be amenable  
15          to handling his prepared testimony by declaration,  
16          similar to the fashion in which we handled  
17          Mr. Smeloff's testimony on traffic and testimony  
18          yesterday.

19          So what I would propose, with the  
20          concurrence of the Committee, is that we would  
21          resubmit Mr. Pearson's prepared testimony in the  
22          form of a declaration, which would be essentially  
23          the same document with a line at the bottom  
24          indicating that it's submitted under penalty of  
25          perjury for the record.



1           With respect to Mr. Jenkins, I will go  
2 ahead and proceed with him for a very limited  
3 prepared testimony, which I think will consist of  
4 only a handful of questions.

5           HEARING OFFICER VALKOSKY: That comports  
6 with the previous understanding. Let me confirm  
7 that there are no objections to this?

8           MS. MINOR: No objections.

9           MR. WESTERFIELD: No objections.

10          HEARING OFFICER VALKOSKY: Tentatively,  
11 we'll mark Mr. Pearson's declaration of prepared  
12 testimony as Exhibit 27 for recordkeeping  
13 purposes, and you will submit that when?

14          MR. CARROLL: I will submit that before  
15 the end of the week.

16          HEARING OFFICER VALKOSKY: Thank you.  
17 We'll prospectively admit Exhibit 27.

18          Okay. Proceed with Mr. Jenkins.

19          MR. CARROLL: Thank you.

20          Applicant calls Robert Jenkins in the  
21 area of transmission line safety and nuisance.  
22 Whereupon,

23                       ROBERT JENKINS

24          Was called as a previously duly sworn witness  
25 herein and was examined and testified as follows:

## 1 DIRECT EXAMINATION

2 BY MR. CARROLL:

3 Q Mr. Jenkins, could you please state your  
4 name and title.5 A My name is Robert Jenkins, and I'm  
6 transmission support principal at Mirant.7 Q And are you the same Mr. Jenkins who  
8 submitted prepared testimony in both the areas of  
9 transmission system engineering and transmission  
10 line safety and nuisance, which was admitted into  
11 the record earlier today?

12 A Yes.

13 Q Thank you. And Mr. Jenkins, I have just  
14 one question for you. Recognizing that  
15 Mr. Pearson, whom we've just discussed, conducted  
16 the analysis with respect to transmission line  
17 safety and nuisance, and specifically EMF,  
18 interference or impacts associated with EMF, but  
19 also recognizing that he conducted that analysis  
20 with input from transmission experts associated  
21 with the project, in light of the changes to the  
22 transmission interconnection that were discussed  
23 earlier today under the topic of transmission  
24 system engineering, would you expect Mr. Pearson's  
25 analysis to change in any way as a result of

1 different input that he would be provided by you  
2 corresponding to the changes in the transmission  
3 system interconnection?

4 A I expect there may be some minor change,  
5 and that change would be associated with the  
6 elimination of the switch yard. As such, with the  
7 switch yard elimination there are going to be less  
8 facilities on site, less equipment. There will  
9 also be lower current flows on the circuit as  
10 you'll have more circuits going from the site over  
11 to the switch yard, so each circuit will carry  
12 less current.

13 Q So, in other words, if Mr. Pearson were  
14 to rerun the analysis described in his prepared  
15 testimony that's now been marked as Exhibit 27  
16 with new information from you, based on the  
17 changes in the transmission interconnection, you  
18 would expect the identified impacts to be less?

19 A That's correct.

20 Q Thank you.

21 MR. CARROLL: I have no further  
22 questions of Mr. Jenkins on this topic and tender  
23 him for cross-examination on the limited issues to  
24 which he testified.

25 HEARING OFFICER VALKOSKY: Mr. Ratliff?

1 MR. RATLIFF: Yes.

2 CROSS-EXAMINATION

3 BY MR. RATLIFF:

4 Q Mr. Jenkins, you're basically familiar  
5 with the new configuration that's been described  
6 today that the Applicant is proposing for the  
7 interconnection; is that correct?

8 A Yes.

9 Q And is there anything about that new  
10 interconnection, that new configuration that would  
11 to your knowledge in any way increase the exposure  
12 of the general public to electromagnetic fields  
13 from the transmission facilities?

14 A Not to my knowledge, no.

15 Q Okay. And when you said earlier that  
16 the amount of current on the line would go down,  
17 what was the reason for that?

18 A The previous design had all of the power  
19 at the Potrero switch yard consolidated and then  
20 sent out, some to Hunter's Point but a large part  
21 from the Potrero switch yard, as identified in the  
22 original AFC, it was over 1500 amperes. That's  
23 because you're taking everything to the switch  
24 yard in two circuits.

25 And with the new design, each generating

1 unit will have an individual circuit going over to  
2 the switch yard and, therefore, each circuit will  
3 carry less current.

4 Q And is there a correlation between the  
5 strength of the current and the strength of the  
6 electromagnetic fields?

7 A Yes.

8 Q Thank you.

9 MR. RATLIFF: I have no other questions.

10 HEARING OFFICER VALKOSKY: City and  
11 County?

12 MS. MINOR: No questions.

13 HEARING OFFICER VALKOSKY: CBE?

14 MR. ROSTOV: No questions for this  
15 witness.

16 HEARING OFFICER VALKOSKY: Redirect?

17 MR. CARROLL: No redirect.

18 HEARING OFFICER VALKOSKY: Any exhibits  
19 to tender?

20 MR. CARROLL: No additional exhibits to  
21 tender. All of the exhibits pertaining to this  
22 topic area were tendered in the area of  
23 transmission system engineering, unless do you  
24 want me to restate them, or --

25 HEARING OFFICER VALKOSKY: No, that's

1 fine. I was just looking for anything additional.

2 Okay, thank you.

3 Any further questions for Mr. Jenkins?

4 The Committee thanks and excuses the  
5 witness.

6 (The witness was excused.)

7 HEARING OFFICER VALKOSKY: Mr. Ratliff?

8 MR. RATLIFF: Yes. The Staff witness is  
9 Mr. or Dr. Obed Odoemelum.

10 HEARING OFFICER VALKOSKY: Swear the  
11 witness, please.

12 THE REPORTER: Would you stand and raise  
13 your right hand, please, sir.

14 Whereupon,

15 OBED ODOEMELAM

16 Was called as a witness herein and, after first  
17 being duly sworn, was examined and testified as  
18 follows:

19 DIRECT EXAMINATION

20 BY MR. RATLIFF:

21 Q Dr. Odoemelum, did you prepare the  
22 portion of the final staff assessment that is part  
23 of Exhibit Three titled transmission line safety  
24 and nuisance?

25 A Yes, I did.

1           Q     Is that testimony true and correct to  
2     the best of your knowledge and belief?

3           A     Yes, it is.

4           Q     Do you have any changes to make to it at  
5     this time?

6           A     Yes, just a few changes that relate to  
7     what's been discussed earlier about the change in  
8     the connection points, and the fact that there  
9     would be no new project with the switch yard. And  
10    so I will have to make some changes in my  
11    testimony, notably in which I pointed to the  
12    necessity for a new switch yard. I'm going to the  
13    fact that transmission to the PG&E system would  
14    be, the connection to the system would be clearly  
15    existing with an outside switch yard, which would  
16    be modified.

17          Q     So to make sure I --

18                HEARING OFFICER VALKOSKY: I'm sorry,  
19    Mr. Ratliff, could you direct your witness to  
20    speak into the microphone. Thank you.

21    BY MR. RATLIFF:

22          Q     To make sure that I understand your  
23    answer, are you saying that the changes that you  
24    would make would be in recognition of the changes  
25    in the project configuration that we've discussed

1 today?

2 A Yes.

3 Q Okay. And do those changes in the  
4 configuration change your conclusions in any way?

5 A No, they will not.

6 Q What are the kinds of hazards that you  
7 consider associated with transmission lines?

8 A The most significant ones are related to  
9 aviation safety, which relate to the potential for  
10 collision with area aircraft, interference with  
11 radio frequency communication which will manifest  
12 itself as interference with radio reception, radio  
13 signal reception or TV reception, audible noise,  
14 fire hazards, and then exposure to electromagnetic  
15 fields are the most significant ones.

16 Q Are those the considerations that you  
17 analyzed for this project?

18 A Yes, they are.

19 Q In your view, is the underground cable  
20 between Potrero substation and the Hunter's Point  
21 substation the only potential new source of  
22 electromagnetic fields that would be -- that could  
23 affect the public?

24 A Yes, it is, because the rest -- the  
25 overhead lines that I proposed are located



1 entirely within property lines of the Potrero  
2 power plant.

3 Q In your view, would the electromagnetic  
4 fields from this transmission line pose a  
5 significant health concern for such a line?

6 A Well, to the extent that the PUC has  
7 reviewed the EMF held issue and made a  
8 determination that these lines should be designed  
9 according to the guidelines that we would require  
10 for this facility, any exposure would be as deemed  
11 appropriate in light of existing knowledge.

12 Q So are you talking about the CPUC's no-  
13 cost/low-cost policy?

14 A Yes, I am.

15 Q And can you describe those briefly?

16 A The PUC in 1989 brought together a group  
17 of people, and I was a member of them, to examine  
18 the EMF held issue and make recommendations. And  
19 we made recommendations to the PUC in 1989 and  
20 they made a decision in 1993 in which they  
21 required all utilities to prepare specific EMF  
22 reduction guidelines for all their transmission  
23 lines in later facilities.

24 The utilities that are not directly  
25 related by the PUC voluntarily prepared these same

1 guidelines. So this was PUC's way of ensuring  
2 that the EMF issue was handled with regard to  
3 resources and design changes uniformly. And these  
4 are required by staff for all the lines that are  
5 proposed that come before us, and what we required  
6 for these lines also.

7 And so this is a uniform requirement for  
8 which we also specify our standard conditions for  
9 certification.

10 Q And so the project would be built  
11 consistent with those no-cost/low-cost guidelines?

12 A Yes, it will.

13 Q Do you have anything else to add to your  
14 testimony?

15 A No, except again, that the design is  
16 what we're most interested in, and that they are  
17 required to be constructed according to the  
18 guidelines of the service utility in this area,  
19 which is PG&E, and the Applicant intends to follow  
20 these guidelines and have specified the specific  
21 conditions of certification to ensure that.

22 Q Okay.

23 MR. RATLIFF: That concludes the  
24 witness's testimony. He's available for cross.

25 HEARING OFFICER VALKOSKY: Cross,

1 Mr. Carroll?

2 MR. CARROLL: No cross-examination,  
3 thank you.

4 HEARING OFFICER VALKOSKY: Ms. Minor?

5 MS. MINOR: No cross.

6 MR. ROSTOV: I just have a few  
7 questions, and this is CBE.

8 CROSS-EXAMINATION

9 BY MR. ROSTOV:

10 Q My first question is, in January 2002  
11 there was a new study that found alarming results  
12 regarding peak exposures of women to EMF that said  
13 they had three times risk of miscarriage. Are you  
14 familiar with that study?

15 A In general, I am.

16 Q In general?

17 A Yes.

18 Q That's the study by Dr. Li, et al., from  
19 the Kauser (phonetic) Foundation?

20 A Oh, yes. In fact, that was one of the  
21 studies that was financed by Public Health  
22 Services.

23 Q Okay.

24 MR. ROSTOV: I have a copy of that  
25 study. I could pass it out and just show it to

1 him?

2 HEARING OFFICER VALKOSKY: Could you,  
3 please.

4 MR. ROSTOV: Okay.

5 BY MR. ROSTOV:

6 Q This study came out -- And you said you  
7 are familiar with the study.

8 A Yes, I am.

9 Q And this study came out in January 2002.  
10 I was curious, did you consider the study when you  
11 wrote your testimony?

12 A Not only this, but, as you know, there  
13 are studies on EMF on health are voluminous, and  
14 I'm aware of this, and it's not just based on  
15 observation of studies, but you also have to  
16 consider any mechanistic method for explaining  
17 these findings.

18 Q Right. So my question is did you  
19 consider this study when you wrote your testimony  
20 regarding EMF?

21 A Yes, I did, these and hundreds more like  
22 it.

23 Q Okay. In your testimony there is no  
24 reference to any literature on EMF on the types of  
25 studies you considered. Why didn't you list or

1 discuss some of the studies where you discounted  
2 the health effects of EMF?

3 A I did not discount the health effects of  
4 EMF. As I indicated earlier, I was part of this  
5 consensus group that was empaneled by PUC, and we  
6 held hearings and got all the experts whose  
7 results and findings were at the root of EMF  
8 concern.

9 In my past testimonies, I used to  
10 discuss these studies. As you know, the most  
11 important part was looking at children, and no  
12 longer going to -- discussing those in general,  
13 but I do summarize the fact that the PUC has  
14 established or staff did and other agencies that  
15 health impacts have not been established.

16 But I was the one that supplied the  
17 sentence to point to the fact that the absence of  
18 findings does not denote the absence of -- does  
19 not prove the absence of impacts. And because of  
20 that, the PUC said, given the uncertainty, there  
21 should be exposure reduction to the extent  
22 feasible.

23 So I do consider all those studies in  
24 making my summaries.

25 Q And this PUC study, am I correct that

1       came out in '93? Is that what you're referring  
2       to?

3           A       No, the PUC decision.

4           Q       Was in what year?

5           A       1993.

6           Q       So since 1993, have you been following  
7       the literature and considering the new literature  
8       on EMF exposure and the environmental effects of  
9       it when you prepared testimony in this case?

10          A       Yes, I'm part of a subcommittee that has  
11       oversight over the existing studies on EMF  
12       throughout the States and the world.

13          Q       Okay. In this study that I just showed  
14       you, that study by Dr. Li, et al., he found a  
15       threshold health impact level of 16 milligauss for  
16       peak exposure. How does that 16 milligauss  
17       compare to the levels you've identified at the  
18       fence line?

19          A       Well, you can't point to just one study  
20       and ask that we use it for regulation. The 16  
21       milligauss, it's related to reproductive impacts.  
22       But we have also two milligauss, which relates to  
23       the leukemia issue, which was the driving force in  
24       the first place. So as far as we can see, the  
25       cancer risk is a more sensitive concentration than

1 suggested by this study.

2 Q If I understand the study, this study  
3 relates to peak exposure, and correct me if I'm  
4 wrong, but I believe previous studies have mostly  
5 referred to average exposure rather than peak?

6 A Well, yes. You have to, again, look at  
7 a mechanistic angle to it. We don't even  
8 understand reasons for miscarriages, and we're  
9 talking of exposure that induces electric currents  
10 that are almost a million times smaller than  
11 occurs naturally in the body, so you not only look  
12 at these studies but you have to look at a  
13 mechanistic angle to this.

14 There are very, very few human  
15 reproductive toxins, and it would take a genius to  
16 explain how EMF, at the levels at which we've  
17 counted them, could cause something for which we  
18 have very, very few environmental factors.

19 Q Okay. I guess I'm still trying to --  
20 And maybe I've asked this. Do you update your  
21 analysis each time new studies come out, or do you  
22 just rely on the PUC? I'm just trying to get that  
23 clear in my mind, I'm not sure.

24 A It is part of my job by the Energy  
25 Commission to follow every finding on EMF.

1           Q     Okay.  And in evaluating health risks  
2     from exposure to EMF, did you take into account  
3     the health impacts from peak exposure rather than  
4     average exposure?

5           A     Yes, I do.

6           Q     And in a report that I prepared in 1982,  
7     I pointed to the fact that scientists have not  
8     even established whether the relevant biological  
9     exposure is exposure past a certain peak level of  
10    exposure that continues for -- So we don't know  
11    what aspect of exposure constitutes the  
12    biologically relevant factor.

13                   So we get studies that have all kinds of  
14    exposure regiment, and you have to consider all of  
15    those in arriving at a conclusion.

16          Q     All right.  So in evaluating this  
17    particular project, how did you take into account  
18    peak levels of exposure?

19          A     In terms of --

20          Q     In terms of the EMF exposure at the,  
21    potential EMF exposure from this project.  How did  
22    you take into account peak exposure levels?

23          A     Well, I have considered peak exposure,  
24    because many studies that have been published have  
25    considered all kinds of exposures.  Exposures that



1 are long-term same level, exposures that have  
2 peaks and valleys, I have considered all exposure  
3 regiments. And if you go through the literature,  
4 we have all kinds of exposure regiment that have  
5 been published. So this is not the only exposure  
6 type that I have considered.

7 Q So I guess in your testimony I didn't  
8 see where the analysis of peak exposure -- So was  
9 the analysis just like you've read the literature  
10 and I don't think there's an exposure, or was  
11 there -- What was your analysis is what I'm trying  
12 to get at?

13 MR. RATLIFF: I object on the grounds  
14 that I think that the question mischaracterizes  
15 the witness's testimony. I think that the  
16 witness's testimony actually explains that there  
17 is very little exposure at all from this project.

18 So if you have no exposure from EMF, I  
19 don't think you can really have health impacts  
20 that are related to peak exposure.

21 HEARING OFFICER VALKOSKY: Point  
22 understood, but I think it would benefit everyone  
23 if we could just get a yes or no answer to the  
24 question, and that is did your analysis include  
25 peak exposure?

1           THE WITNESS: Yes. There are two  
2       issues. There are two types of exposure, the  
3       exposure that related to the pregnancy outcomes,  
4       and long-term exposures, usually residential  
5       exposures. And we specifically noted in our  
6       testimony that the nearest resident is 250 feet  
7       away, and that the long-term exposure that is at  
8       the root of the present concern is not significant  
9       for this project. I specified that in my  
10      testimony.

11          HEARING OFFICER VALKOSKY: Okay, and  
12      would that long-term exposure be more hazardous to  
13      human health than a peak exposure?

14          THE WITNESS: With a long-term exposure,  
15      it's the exposure that has been at the root of the  
16      finance. We don't know what pattern of exposure  
17      is more relevant in this EMF exposure scenario.  
18      We don't know in the other papers I've written in  
19      my past testimonies where I've discussed this, we  
20      said that we have not established what pattern of  
21      exposure is more biologically relevant.

22          HEARING OFFICER VALKOSKY: And in spite  
23      of that uncertainty, your testimony nevertheless  
24      was that you do consider and you did in this case  
25      consider peak exposure?

1 THE WITNESS: Yes.

2 HEARING OFFICER VALKOSKY: Thank you.

3 Proceed.

4 MR. ROSTOV: Thank you. I appreciate  
5 you clarifying that.

6 BY MR. ROSTOV:

7 Q I'm still also unclear on the studies  
8 that you actually used to support your testimony,  
9 and why didn't you list them. There are two  
10 questions: What are those studies and why weren't  
11 they listed in the testimony?

12 A I must have reviewed four or five  
13 studies on EMF. What I do in my testimony is  
14 point to the reason behind Staff's analysis, and  
15 in this I indicated that Staff has analyzed the  
16 studies and that we've come to the conclusion, as  
17 did PUC and the other agencies. We specified that  
18 in our testimony.

19 Q Okay. I understand that.

20 Did you consider the cumulative impact  
21 of EMF exposure from the project in addition to  
22 existing levels of EMF exposure people already  
23 face from existing sources?

24 A Well, yes. What do you call cumulative  
25 impact? In this case I think you are confusing

1 EMF exposure understandably with the kind of  
2 exposure we would get from air toxics, where there  
3 is an accumulation. There have been no showings  
4 that there is a cumulative -- there is no  
5 accumulation, as we are used to with normal  
6 environmental toxins. This is exposure that we  
7 don't know if it accumulates, it just -- it's part  
8 of what occurs naturally in the body.

9 So cumulative exposure as the layperson  
10 would understand it with respect to normal  
11 environmental toxins have very little relevance in  
12 the EMF exposure.

13 Q I think I meant more from a cumulative  
14 exposure from other EMF sources in the Potrero, in  
15 close proximity to the Potrero power plant.

16 A Oh, other sources of EMF --

17 Q Right, did you -- Sorry for  
18 interrupting. Did you consider the cumulative  
19 effective of those sources, plus the new project  
20 Unit Seven?

21 A Yes, I did, and I also reflected that in  
22 my testimony in which I noted that humans are  
23 exposed to much higher levels in the home.

24 Q Okay. So since you've considered that,  
25 what was the total peak exposure that people could

1 cumulative be exposed to from the project and  
2 existing sources?

3 A For this particular project --

4 Q Right.

5 A -- I think that what I have as the  
6 exposure level at the nearest residence is below  
7 background levels. Let me see if I can get the  
8 peak exposure. In the section on electromagnetic  
9 field exposure, I indicated --

10 Q Can you just tell the page number for  
11 the record, please.

12 A Oh, in my testimony it's page 11. I  
13 suppose it's a different pagination.

14 HEARING OFFICER VALKOSKY: No, the page  
15 reference in the FSA.

16 MR. RATLIFF: His version is one that  
17 was generated on a computer with the pagination of  
18 the FSA --

19 THE WITNESS: Yeah, I'm referencing my  
20 testimony.

21 MR. RATLIFF: It's page 4-11, 4.11-10,  
22 and 4.11.11.

23 MS. MINOR: Isn't it five?

24 HEARING OFFICER VALKOSKY: Five? Yes.

25 MR. ROSTOV: It's five in his testimony.

1 THE WITNESS: And it's electromagnetic  
2 field exposures.

3 BY MR. ROSTOV:

4 Q Okay, so --

5 PRESIDING COMMISSIONER PERNELL: All  
6 right, before we -- Does everybody have that? We  
7 finally got on the same page here.

8 MR. ROSTOV: Well, my page number --

9 PRESIDING COMMISSIONER PERNELL: Well,  
10 his page number is different in terms of it came  
11 off of his computer.

12 MR. ROSTOV: Yeah, right there.

13 THE WITNESS: Electromagnetic field  
14 exposure. It's under impacts.

15 HEARING OFFICER VALKOSKY: Is it under  
16 project -- Off the record, please.

17 (Brief recess.)

18 THE WITNESS: So I indicated here that  
19 the exposure at the nearest residence, where the  
20 long-term exposure at the root of the concern,  
21 will be nil by ground level of 1.14 milligauss.

22 BY MR. ROSTOV:

23 Q Right, and is that average or peak  
24 exposures I guess is the question?

25 A Oh, this is average long-term exposures.

1           Q     Okay.  So within this testimony there is  
2     no peak exposure calculated; is that correct?

3           A     Well, this is -- What we do for, in  
4     analyzing a project like this is we have the  
5     maximum exposure.  This is the maximum exposure  
6     possible from this project that is calculated by  
7     maximum electric current flow possible within the  
8     lines.  So this is maximum exposure possible, 1.14  
9     milligauss.

10          Q     Okay.  But at the plant boundary, if I'm  
11     reading this correctly, it's 160 milligauss?

12          A     Yes, and again, that was the exposure to  
13     workers and the concern about health effects on  
14     workers, and short-term exposure is different.

15          Q     So how does that number, the 160 number,  
16     compare to the threshold health impact found in  
17     this health study by Dr. Li of 16 milligauss for  
18     miscarriages?

19          A     Well, you'll find that associated  
20     specific exposure levels with observed  
21     reproductive outcomes has not established a cause-  
22     and-effect relationship.  So it would be premature  
23     to assume that to use this one study, make an  
24     analysis of EMF exposure, saying that a health  
25     impact at specific exposure levels -- health

1 impacts have not been established from EMF  
2 exposures. These are observations. I so  
3 specified in my testimony with the PUC, I also  
4 specified that. They have said that health  
5 impacts have not been established from EMF  
6 exposure.

7 Q Can you just explain the difference  
8 between observations and the health impacts?  
9 Maybe that will clear up my confusion.

10 A Okay. This is an epidemiological study,  
11 these observational studies in which the cock will  
12 crow in the morning, and then there's morning.  
13 There is an association. It doesn't mean that one  
14 has anything to do with the other.

15 In order to establish a cause-and-effect  
16 relationship for environmental toxins, and  
17 certainly enough to use for regulation, we have to  
18 not just find these epidemiological studies that  
19 have very serious drawbacks, we have to establish  
20 this, that will give us a basis for more  
21 laboratory studies and then for mechanistic  
22 studies.

23 But right here, these are the reasons  
24 we're concerned. But these do not provide any  
25 proof, and certainly not enough for us to use in



1 regulation.

2 Q Okay. So just to conclude, do you  
3 discount this study because -- You did not use  
4 this study as a basis for your testimonies?

5 A No. This study and many like it are  
6 part of literature that I rely on in making my  
7 conclusions as to how to assess EMF exposure from  
8 any source. So I considered this study and other  
9 findings that look at other end points. This is  
10 reproductive impacts and so they were all studied.  
11 But you cannot use one of them, you can't use one  
12 study and ask staff or any agency to use that as  
13 proof of impact and use that to set limits.

14 As you know also, no state agency  
15 anywhere has set limits based on health. We  
16 specify that in our testimony.

17 Q And your testimony did refer to state  
18 agencies that set specific environmental limits?

19 A Yes, but we said that none of those are  
20 based on health impacts in the next sentence.

21 Q Okay.

22 MR. ROSTOV: I think I'm done with my  
23 cross-examination.

24 HEARING OFFICER VALKOSKY: Okay, thank  
25 you.

1           PRESIDING COMMISSIONER PERNELL: Let me  
2 ask a question. Do you have a list of all of the  
3 studies that you've mentioned that you can perhaps  
4 provide to the Committee?

5           THE WITNESS: I'll be glad to.

6           PRESIDING COMMISSIONER PERNELL: And I  
7 don't know how many it is, but it appears to me  
8 that you have a -- you're relying on a lot of  
9 studies and they're not listed. If you can just  
10 list them, maybe that will ease some of the  
11 uncertainty of your testimony.

12          THE WITNESS: I'll be glad to.

13          PRESIDING COMMISSIONER PERNELL: Okay,  
14 thank you.

15          HEARING OFFICER VALKOSKY: Yes, if you  
16 would just have that proved to the parties, and  
17 docketed.

18          THE WITNESS: Yes, I will.

19          HEARING OFFICER VALKOSKY: Thank you  
20 very much.

21          Redirect, Mr. Ratliff?

22          MR. RATLIFF: Yes.

23                   REDIRECT EXAMINATION

24 BY MR. RATLIFF:

25           Q     Dr. Odoemelam, could you give us

1 comparative EMF exposures from the use of typical  
2 household appliances as compared to those  
3 discussed in the FSA.

4 A Okay. As you know, we used to include  
5 those tables in our testimonies in the past to  
6 show that the use of normal household appliances  
7 like in the literature will expose you to EMF for  
8 hundreds of milligauss. Again, the difference is  
9 that those are short-term exposures. And the  
10 exposures that have been responsible for impacts,  
11 the health impacts of concern are long-term  
12 exposures.

13 But from the short-term exposures from  
14 these appliances, they are hundreds of milligauss,  
15 and hundreds of times much higher than those from  
16 short-term exposures from facilities such as this  
17 proposed line.

18 Q Have there been very many studies  
19 concerning short-term exposures?

20 A Yes, there have been many. The  
21 literature is actually, the concern over health  
22 impacts started with short-term exposure of  
23 Russian electrical workers. So we've had hundreds  
24 and hundreds of studies on short-term and long-  
25 term exposure to EMF, electromagnetic.

1           Q     Have any of those studies, other than  
2     this one, to your knowledge, indicated that there  
3     is a significant health risk from short-term  
4     exposures at this level?

5           A     No.

6           MR. RATLIFF: I have no other questions.

7           HEARING OFFICER VALKOSKY: I have one  
8     question. I'm sure Mr. Ratliff probably covered  
9     it, but a lot of your testimony is based on the  
10    EMF effects at the plant fence line. As I  
11    understand, with reconfiguration the switch yard  
12    is now over the fence line.

13           So does that reconfiguration in any way  
14    affect the conclusions in your testimony?

15           THE WITNESS: No. Typically the switch  
16    yard, the greatest exposure is usually around the  
17    periphery of the line, and we require that each  
18    line, each switch yard be constructed according to  
19    the guidelines of the utility in the area. And in  
20    this case, this would be PG&E. And here we have a  
21    switch yard that is PG&E's switch yard.

22           So the one that was to be built before  
23    was to be built according to PG&E's guidelines.  
24    Now we're using PG&E's own switch yard.

25           HEARING OFFICER VALKOSKY: Thank you for

1       that clarification.

2               Recross, Mr. Carroll?

3               MR. CARROLL:  Nothing further.

4               HEARING OFFICER VALKOSKY:  City?

5               MS. MINOR:  No.

6               HEARING OFFICER VALKOSKY:  CBE?

7               MR. ROSTOV:  No.

8               HEARING OFFICER VALKOSKY:  Nothing else  
9       for this witness?

10              The Committee thanks and excuses the  
11     witness.

12              (The witness was excused.)

13              HEARING OFFICER VALKOSKY:  Is there any  
14     public comment on the area of transmission line  
15     safety and nuisance?

16              MR. ROSTOV:  Excuse me, do you mind if I  
17     just put this into the record?

18              HEARING OFFICER VALKOSKY:  Certainly  
19     not.  I can certainly docket that for you, if  
20     you'd like.

21              MR. ROSTOV:  That would be great.  Can  
22     this just be an exhibit or is there a difference  
23     between docketing --

24              HEARING OFFICER VALKOSKY:  There is a  
25     distinction.  The hearing record is something that

1 is sponsored and accepted at the hearing. The  
2 broader administrative record is basically all  
3 relevant materials that are docketed. If you'd  
4 like, I will certainly docket that for you.

5 MR. ROSTOV: Thank you. That would be  
6 great.

7 HEARING OFFICER VALKOSKY: Okay.

8 Is there any general comment at all?

9 Seeing none, I would --

10 PRESIDING COMMISSIONER PERNELL: Oh, we  
11 have one.

12 HEARING OFFICER VALKOSKY: Ms. Minor?

13 MS. MINOR: I just have a process  
14 question for July. Do you anticipate having a  
15 full prehearing conference at the end of testimony  
16 in July, such that you will bring in all the  
17 agencies that were at the prehearing conference in  
18 April?

19 HEARING OFFICER VALKOSKY: No, my  
20 intention is to have basically a very abbreviated  
21 prehearing conference, relying primarily on  
22 relevant updates in any of the topic areas from  
23 the parties as well as any significant changes in  
24 position from those positions at the April 29th  
25 prehearing conference.

1 I do not intend to have -- I do not  
2 encompass, or do not envision, excuse me, having  
3 other agencies present. If they're there and wish  
4 to participate, they're certainly eligible to.  
5 So, again, just think update on what occurred on  
6 April 29th, with specific emphasis on any changes  
7 which may have occurred since then.

8 Okay, does that answer your question?

9 MS. MINOR: Yes, it does. Specifically,  
10 the City would like to get a time line, if one is  
11 available, from VMFS. We left the prehearing  
12 conference in April with an open question as to  
13 whether Mirant's submittals had been deemed  
14 adequate.

15 Now, I asked that question of their  
16 witness yesterday and they didn't know -- You  
17 know, it's several months later and we still don't  
18 know.

19 HEARING OFFICER VALKOSKY: Well, let's  
20 just do it the easy way. Mr. Carroll, please be  
21 prepared to provide an update on that at the July  
22 session.

23 MR. CARROLL: We'll be prepared to do  
24 that and we would like to know the answer to that  
25 question too.

1 MS. MINOR: Okay.

2 (Laughter.)

3 HEARING OFFICER VALKOSKY: Well, it's  
4 obviously a very relevant question.

5 MR. CARROLL: I don't mean to be  
6 flippant, but we submitted within the past couple  
7 of days a letter to VMFS asking them that  
8 question, because we had not gotten a response  
9 from them. So we are pursuing the answer to that  
10 question and we will be prepared to talk about it  
11 in July.

12 HEARING OFFICER VALKOSKY: Okay. That  
13 would be great.

14 If there's nothing else, the Committee  
15 thanks the parties for their attendance,  
16 participation, and professionalism, and we're  
17 adjourned for today.

18 PRESIDING COMMISSIONER PERNELL: Thank  
19 you all.

20 (Thereupon, the hearing was adjourned at  
21 3:38 p.m. to reconvene July 22nd, 2002.)

22 --oOo--

23 \*\*\*\*\*

24 \*\*\*\*\*

25 \*\*\*\*\*



## CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter,  
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herein; that I recorded the foregoing California  
Energy Commission evidentiary hearing; that it was  
thereafter transcribed into typewriting.

I further certify that I am not of  
counsel or attorney for any of the parties to said  
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said hearing.

IN WITNESS WHEREOF, I have hereunto set  
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